THE DEVELOPMENT OF A CONCEPT OF

PSYCHOLOGICAL WELL-BEING

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TO my family,

especially to my wife

and children

P R O L O G U E

"Mental health is a forest, or perhaps better a jungle; it is a deep and seemingly impenetrable forest distinguished by a wide variety of trees--some exotic, others commonplace--that are all intertwined in a fashion to discourage the scientific woodsman from even beginning a search for order."
(Bradburn, 1969, p. 223)

[It is the writer's hope that the present study represents a journey into the forest.]

ABSTRACT

This thesis focuses on the development of an operational and theoretically eclectic concept of psychological well-being. A comprehensive research strategy was employed to examine various personality factors thought to be components of psychological health (i.e., the basis of the proposed concept). The general approach involved four major phases: (1) the clustering of various variables and identification of underlying key factors purported to be related to psychological health based on the writer's clinical experience and review of the mental health literature, (2) the formulation of an *a priori* concept of psychological well-being based on the operational definition of those factors, (3) the construction of an inventory designed to examine the proposed concept, and (4) the interpretation of the results and their implications for the development of the overall concept based on the examination of the factorial structure, validity and reliability of the inventory. The "*a posteriori* concept" evolved out of this process.

The results of the present study indicate that the most valid and reliable factorial components of psychological well-being are self regard, interpersonal relationship, independence, problem-solving, assertiveness, reality testing, stress tolerance, self-actualization and happiness; social responsibility and flexibility emerged as questionable components of the *a posteriori* concept.

The inventory which was designed to study the concept was successful in significantly differentiating various levels of psychological health.

This way of conceptualizing and assessing psychological well-being has potential applicability for mental health practitioners and researchers.

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CHAPTER ONE

INTRODUCTION

1.1 THE PURPOSE, AIM AND GENERAL APPROACH OF THE PRESENT STUDY

The primary purpose of the present study is to begin to develop an operational and theoretically eclectic concept of psychological well-being, whilst the secondary aim is to construct an inventory designed to study various personality aspects of this concept.

1.1.1 The development of a concept of psychological well-being

This study will endeavour to develop a concept of psychological well-being through the employment of a comprehensive research strategy primarily based on empirical methodology--i.e., "empirical methodology" is here defined as a systematic and experimental approach of testing hypotheses in order to arrive at conclusions based on the evaluation of collected, quantified and statistically analysed information and observations (Burchfield, 1982; Coan, 1977, p. 2; Goldenson, 1984;

Shapiro, 1983, p. 18). In essence, this is an attempt to take a closer and more systematic look at what mental health professionals are concerned with when they observe, assess and treat psychological problems (or problems of psychological well-being). This strategy will be clearly outlined and described in the following chapters.

1.1.2 Construction of a personality inventory designed to study psychological well-being

The secondary aim of this research is the construction of an inventory designed to study various personality factors that are thought to play a key role in psychological well-being.

The a priori formulation of psychological well-being, based on the writer's clinical experience and survey of the literature, will guide the construction of this experimental instrument; and the results obtained from the employment of the instrument will be used as a source of information in the development of the a posteriori concept of this phenomenon. Lastly, the final form of the concept and the process of its development may aid in further refinement of this instrument which could eventually lead to the development of an actual psychological health inventory.

Although large sections of this thesis deal with the construction of the experimental inventory and results obtained from its employment, the main purpose of the research is clearly the development of a concept and not an inventory of psychological well-being. The experimental instrument, as such, is an integral part of the methodology.

1.2 THE IMPETUS FOR THE PRESENT STUDY

The impetus for conducting the present study stems from three major sources: (1) the humanistic movement in psychology, (2) the writer's experience as a clinical psychologist and (3) Marie Jahoda's study of positive mental health.

1.2.1 The humanistic movement

An important source of the impetus for conducting the present study stems from the impact of the humanistic movement on psychology.

From an historical perspective, it can be seen that a number of factors influenced this movement which in turn effected mental health practitioners and researchers in the way they viewed psychological well-being.

In the early 1960s, the humanistic movement (the "third force") was becoming an influential force in psychology though still overshadowed by psychoanalysis (the "first force") and behaviourism (the "second force"). In recalling the early beginnings of the movement and its raison d'etre, Buhler (1979) stated that the founders were "restive about the prevailing trends in psychology, which were mainly experimental-structural and behavioristic or psychoanalytic." In addition to this increasing feeling of general discontent amongst psychologists, the western world as a whole began to witness by the mid 1960s what came to be called the "counterculture". This phenomenon grew out of the period and the needs of that period, out of a general quest for a society characterized by justice, love and respect for human life. The counterculture proved to be catalytic with respect to the "popularity" of the humanistic movement in the mental health professions (Coan, 1977).

The notion of a "humanistic" psychology reflected a need then felt by many for a reversal of trends within psychology (Buhler, 1979). This specific trend in psychology, thus, shares the spirit and concern of the counterculture of that period (Coan, 1977, pp. 276-277).

Certain issues which the humanistic psychologists were raising augmented the critique of the psychological and psychiatric "establishment" of the day. Most importantly, it represented a swing away from focusing primarily on psychopathology (and various other "residua" from the biomedical model) towards enhancement of normal growth. It was a break from the psychoanalytic "normality as fiction" orientation which suggested that "normality", let alone optimal psychological well-being, is an unobtainable myth. Buhler (1979) considered it a "near-revolutionary step to create confidence in the concepts of healthy growth and constructive potentials of human nature" in that "for so long the predominant outlook had been one stressing the neurotic disturbances in peoples' lives." In essence, it counterbalanced the pathological side of the individual with that of optimal health thereby offering an added and expanded dimension to psychological well-being. The shift was from ego defense to ego strength and coping, from person as "object" or "subject" to person as "human being". The humanistic movement influenced people in the mental health establishment and a whole new generation of psychology students, like the writer, to ponder the possibility of personal growth motives rather than or, more importantly, in addition to strivings prompted by organic deficiencies and psychopathology (Coan, 1977, pp. 255-280; Coleman, 1976, pp. 66-70).

1.2.2 The writer's experience as a clinical psychologist

The primary reasons for and motivating force behind conducting this study slowly grew out of the writer's experience as a clinical psychologist over the past seventeen years. A number of observations were made as a result of this experience, four of which will be discussed below.

The first observation centers around the issue of semantic and conceptual confusion. More specifically, communication difficulties arise between mental health professionals when they attempt to describe what and who they assess and treat. For example, valuable professional time is often spent clarifying the meaning and importance of such terms like "penis envy", "poor object relations", "lack of spirituality" and "cognitive deficiencies" when discussing a particular person or people in general. Two factors might partially explain this difficulty in communication. The first is that many mental health professionals may not actually have or work with a clear concept of psychological well-being; and, hence, their difficulty in conveying to others and understanding what they focus on in assessment and therapy is quite understandable. The second is that communication is frequently hindered between clinicians because of their different professional and theoretical backgrounds (i.e., a type of conceptual clashing manifested by semantic confusion).

This confused communication motivated the writer to explore more carefully what sorts of phenomena are actually and generally focused upon in assessment and therapy. An attempt was made to look for meaningful commonalities. This was done by paying more attention to what the clinician was actually describing (i.e., the phenomenon) rather than the way in which it was described (i.e., the name). This meant listening at

a deeper level whilst suppressing the superficial cosmetic nature of the theoretical and professional terminology. Not only was jargon purposely ignored but also its theoretical derivation. This approach led to two additional observations.

The second observation was that in spite of this semantic and conceptual confusion, there are a number of basic underlying themes that cut across professional and theoretical lines. These recurring themes and general areas which are the focus of attention appear to be personality characteristics for the most part (e.g., the manner in which one relates to oneself and others, ways of dealing with problems, methods of expressing emotions, etc.); that which is specifically focused upon differs from clinician to clinician, shifts over time in most clinicians and is guided by the particular individual being assessed or treated at the time.

The third observation is that many of the clinicians that the writer has come in contact with over the years have crossed over from one theoretical orientation to another during their careers, and most have tailored their conceptual approaches to suit their own personalities and the individuals with whom they work (i.e., both clients and colleagues). In spite of the simplicity and obviousness of this observation, it may indicate a search for "better" approaches stemming from dissatisfaction.

The fourth and last observation is that most mental health professionals concentrate more on psychopathology and tend to neglect the more "eupsychic" (Maslow, 1976) and "salutogenic" (Antonovsky, 1979) factors in assessment and therapy. It is apparently easier for many clinicians to see the psychopathological side of the individual whilst

ignoring, or at least underemphasizing, the healthier sides of personality and psychological well-being. This limited orientation is hardly surprising in that many of the signs and symptoms of psychopathology are obvious and are so clearly associated with human suffering that their understanding and attention constitute a pressing need (Walsh & Shapiro, 1983, p. 5). Moreover, focusing primarily on psychopathology is partly a result of clinical training (Offer & Sabshin, 1974, p. 162) which contributes to what Kaplan (1967) calls "trained incapacity". Thus, trained to assess and treat psychopathology, clinicians often have difficulty in focusing upon the normal, let alone optimal psychological well-being.

The above mentioned observations prompted a review of the mental health literature. This was a means of observing what other clinicians, theorists and researchers consider to be the focus of attention in assessment and therapy. Secondly, it was a method of continuing the search for commonalities between different theoretical orientations and, thus, a means of confirming the recurring themes that appeared to be surfacing; and it was a way of examining the extent to which these themes were related to personality factors. Thirdly, it was a way of exploring the potential contribution to the mental health professions of studying "normal" populations and "optimally functioning" personality structures in addition to psychopathology. Lastly, this represents the next major step in formulating the initial form of the writer's concept of psychological well-being.

1.2.3 Marie Jahoda's study of positive mental health

An additional source of inspiration and motivation for conducting the present study came from reading Marie Jahoda's monumental monograph on optimal psychological well-being which was published in 1958 and entitled Current concepts of positive mental health.

Jahoda was charged by the Joint Commission of Mental Illness and Health (in the United States) to conduct a large scale research project aimed at reviewing and summarizing existing concepts of psychological health (Jahoda, 1958, p. v). This proved to be one of the earliest and very few works of its kind and quality.

Her study represents a bridge between a number of the above-mentioned observations and conclusions (subsection 1.2.2), the impact of the humanistic movement (subsection 1.2.1), and the decision to conduct the present study. She was one of the first researchers who stressed the importance of systematically studying optimal psychological well-being (or "positive mental health" as she referred to it) in addition to the traditional concern for psychopathology. This represented or mirrored some of the thinking being voiced in the humanistic movement which was beginning to take form at the time of her study--i.e., she too was interested in a reversal of the prevailing (psychoanalytic, experimental-structural and behaviouristic) trends and primary emphasis on psychopathology in mental health services and research.

At the conclusion of her study, Jahoda arrived at six main areas which she thought summarized the major components of psychological health that appeared in the literature. These areas are as follows: (1) positive attitudes toward the self, (2) growth, development and self-actualization, (3) personality integration, (4) autonomy,

(5) efficient perception of reality, and (6) environmental mastery. It is important to note that these six components of mental health were not arrived at by empirical methods or any specific statistical procedure for clustering such as factor analysis, but rather by the way she logically categorized key elements within the theories that appeared in the literature (Wright, 1971). More succinctly, her approach was essentially to break down the various theories into conceptual components and then to logically categorize them into a number of clusters composed of similar components. This method of cutting across theoretical boundaries in search of commonalities was very similar to what the writer did when asking other clinicians what they focus upon in assessment and therapy (subsection 1.2.2) and the way in which he reviewed and summarized the mental health literature. Furthermore, both Jahoda and the writer not only came up with common recurring themes irrespective of their diverse theoretical derivations, but these appeared to be personality characteristics and quite similar ones at that.

1.3 THE TERMS "PSYCHOLOGICAL WELL-BEING" AND "PERSONALITY FACTORS"

1.3.1 "Psychological well-being"

Psychological well-being is used in the present study to refer to one's overall psychological condition; this condition has broad cognitive, emotional, and behavioural implications and aspects.

In spite of the fact that psychological well-being and happiness are at times treated as synonyms (Bradburn, 1969), the latter is most likely but one of several factorial components of the overall concept of

psychological well-being and should not be confused with the concept itself.

Although the terms "psychological well-being" and "psychological health" are used interchangeably in the present thesis, the former is preferable to the latter and to other terms which have been and are currently used like "normality", "adjustment" and "maturity" to mention a few of the most popular (Coan, 1977, pp. 1, 72). Each of these other terms are limited, vague and/or misleading when compared to "psychological well-being".

"Normality" rigidly implies an approximation to a social norm or statistical standard; in this sense, the normal person is simply a typical or average member of a particular population (Coan, 1977, pp. 73-75).

"Adjustment" often incorporates the process of adaptability (Hinsie & Campbell, 1967) to different and changing conditions or situations (Conrad, 1952) which is based in large part on flexibility (English & English, 1966), a personality factor which may be yet another component of the broader concept of psychological well-being (Blau, 1954; Scott, 1958).

"Maturity" is also a rather vague and limited term falling short of this more overall psychological condition of the individual in that it has been viewed as some sort of an end stage of personality development marked by a capacity to give and be socially responsible, cooperative and productive (Saul & Pulver, 1965).

In comparing "psychological health" with "psychological well-being", the latter is a more appropriate term. The word "health" is associated with the biomedical model implying an absence of "illness"

(Coan, 1977, pp. 73-75); and both terms are obvious misnomers (Milgram, 1972). The term "illness", as in "mental illness", is inappropriate and misleading for the vast majority of those so assessed (Milgram, 1972); both terms suggest that there is something analogous between the various conditions of the personality and the condition of health and sickness in the body (Coan, 1977, p. viii). Moreover, the word "mental" echoes the outworn dualism of mind and body (Smith, 1959) and draws our attention to the cognitive and intellectual aspects of the individual and away from the social and emotional factors which, in the opinion of many, are the primary areas involved (Milgram, 1972).

Grinker (1969) expressed the frustration related to the difficulty in selecting the most appropriate term to describe this psychological condition: "I care not whether we change the term disease (or psychological health), because of fees, position under the law, or whatever, to disturbance (or psychological well-being); it is still the same euphemistic attempt to define the indefinable."

1.3.2 "Personality factors"

The term "personality" is used in the present thesis (e.g., personality factors, components, characteristics, etc.) in a broad sense to refer to a wide range of intrapsychic, cognitive and interpersonal aspects and characteristics of the individual (Anastasi, 1982, p. 17; Milgram, 1972). As such, "personality factors" refer here to general personal styles, modi vivendi and approaches to self, others and environment; this is similar to what is commonly referred to as "personality traits" which are described as "particular ways that people think, feel and act" (Edwards, 1986).

There is a long-standing debate about the nature of personality traits (factors)--i.e., (1) if they exist or not, (2) if they can be measured, (3) if they are useful, (4) if they can predict future behaviour and (5) how (Bem & Allen, 1974; Edwards, 1986; Epstein, 1979; Mischel, 1973).

The complexity of biopsychosocial factors and determinants (including personality traits) makes it difficult to describe let alone predict behaviour in simplistic or even simplified phenotypic and especially genotypic terms (Edwards, 1986). The purpose of the present study is not to arrive at a "complete" description of human personality but rather to identify, focus upon and describe a limited number of personality factors (traits) purported to be related to the concept of psychological well-being. Moreover, these factors will be used to describe current psychological well-being rather than predict future psychological health which limits the scope even more. The usefulness of this limited approach in studying personality traits in order to provide a "partial map" is justified and recommended in certain situations (i.e., studying one aspect of human behaviour like psychological well-being) by Edwards (1986) who also points out that "personality dimensions like Neuroticism and Extroversion can be used in understanding some of the fundamental differences between people in their general temperament and behaviour." Moreover, Coan (1977, pp. 286-287) clearly stresses that one who formulates a concept of psychological well-being tends to describe a limited number of "personality characteristics".

When addressing the more specific relationship between traits and behaviour, it is important to stress that the present study does not favour the "trait position" of Cattell and Eysenck (which stresses the

primary importance of traits and deemphasizes situational determinants of behaviour) on the one hand nor the "situational position" of Mischel (1973) on the other who argues that traits have proven to be poor predictors of behaviour because of its specificity and inconsistency and the extraordinary complexity of the interactions found between subject variables and conditions. Rather, the favoured approach is that of the (trait-situation) "interaction position" adopted by Bem and Allen (1974) who argue that an individual's behaviour is often consistent from one time to another if the situations are similar and, thus, stress that personality assessment must seriously attend to situations together with personality factors in attempting to predict behaviour. Epstein (1979) has also emphasized this position and has presented fairly convincing research findings that support it. He stresses that "the question of what is more important, the situation or the person (i.e., personality traits), is a meaningless one, as behavior is always a joint function of the person and the situation," and "since behavior never takes place in a vacuum but always occurs in a situational context, it is meaningless to talk about characteristics of an individual's behavior without specifying the situation in which the behavior occurs." He then redefines a personality trait as "a generalized tendency for a person to behave in a certain manner over a sufficient sample of events" which "does not imply that he or she will exhibit trait-relevant behavior in all situations or even on all occasions in the same situation." According to findings presented, Epstein (1979) takes this argument one step further: "Stability can be demonstrated over a wide range of variables so long as the behavior in question is averaged over a sufficient number of occurrences." And based on this, he concludes that "in the long run, we can depend on people

behaving true to character."

In conclusion, it is important to stress that the purpose of the present study is to identify and describe a number of key "personality factors" that are related to psychological well-being. These personality factors (traits) are, in essence, various ways people generally think, feel and act (in most situations most of the time). The writer is of the opinion that such traits exist, can be quantified and are useful in describing and assessing the nature and degree of psychological health. Not only can they aid in evaluating one's present state of health, but such factors may eventually predict one's general well-being (in certain conditions). However, it is important to bear in mind that psychological health is the product of a complex and dynamic interaction between these (psychosocial) personality factors, other (biomedical and sociocultural) determinants and (ever changing) situations and conditions. This makes description, current assessment and, especially, prediction of future psychological well-being difficult (but not impossible). Furthermore, in spite of the fact that employment of psychometric methods in an attempt to quantify personality traits (and other determinants) "cuts the stream (of the dynamic) human experience into (static) pieces" (Shapiro, 1983, p. 56), it is probably the most reliable method of measuring current psychological health and eventually predicting future well-being. Moreover, there is no reliable assessment method which successfully grasps the current "dynamic" nature of human behaviour.

1.4 THE FORMAT OF THE THESIS

Following this introductory chapter, Chapter Two surveys the

mental health literature and presents the a priori concept of psychological well-being based on various personality factors which are operationally defined. Chapter Three gives a detailed description of how the experimental inventory was constructed in order to examine the a priori concept and its proposed structure and components. Chapter Four describes the general design of the present research and reveals the results obtained from its implementation. Finally, Chapter Five summarizes the general conclusions drawn from the results and discusses the implications of the a posteriori concept of psychological well-being that evolved.

CHAPTER TWO

THE CONCEPT OF PSYCHOLOGICAL WELL-BEING IN THE LITERATURE AND THE PRESENTATION OF AN A PRIORI FORMULATION OF THE CONSTRUCT

2.1 INTRODUCTION

This chapter is divided into three sections that deal with (1) the conceptualization and research of psychological well-being in general, (2) the examination of specific personality factors thought to be related to psychological health as revealed in the mental health literature, and (3) the presentation of an a priori formulation of psychological well-being based on operational definitions of these factors.

2.2 THE CONCEPTUALIZATION AND RESEARCH OF PSYCHOLOGICAL WELL-BEING

This section presents a general overview of the mental health literature and then focuses on a number of specific approaches to the problem of conceptualizing and researching psychological well-being.

2.2.1 A general overview of mental health research

This subsection discusses major trends in the field of mental health, the interest in and need for better conceptual models and assessment procedures, the general lack of operationally defined concepts, the paucity of conceptualization based on empirically-oriented research, and the general sparsity of research and methodological shortcomings. The subsection concludes by pointing out the specific lack of and need for an empirically developed multi-factorial and theoretically eclectic concept of psychological health based on a continuum approach.

2.2.1.1 Major trends in the field of mental health: From biomedical and dichotomous to multi-determinant and continuum perspectives: The literature reveals a dynamic merging of developments within the field of mental health which has created a shift of emphasis and interest over time. What has emerged is a very different way of viewing psychological well-being today than it was at the turn of the twentieth century. This section will endeavour to describe what has emerged, what is emerging and possible future trends in this area; there will also be an attempt to tap a number of key developments in the medical, behavioural and social sciences which influenced the underlying process of this shift.

The psychiatric approach to psychological well-being has traditionally been "biomedical" and "dichotomous" in nature. The

biomedical model attempts to view and explain psychological health in biochemical and physiological terms (Coan, 1974, p. 5) at the tissue level of human existence; and the dichotomous approach suggests that psychological health can be conceptualized as the absence of clearly observed signs and symptoms of gross psychopathology (Offer & Sabshin, 1974, p. 3). However, a combination of developments in general medicine, psychiatry, psychology and related areas has weakened the popularity of this model creating a basic shift in the field of mental health as a whole (Offer & Sabshin, 1974, pp. 13-17).

Psychiatry, which was originally concerned primarily with pathology like medical science as a whole, was first influenced by changing trends in medicine itself. According to Offer and Sabshin (1974, pp. 13-17), the most influential force that began to change this approach was the emergence of preventive medicine which focuses on health rather than manifest pathology; and the primary impact of this for psychiatry was to draw more attention to the normality side of the dichotomous view of psychological health.

The first major change within psychiatry itself was the emergence of psychoanalysis. This was the vanguard of the "psychosocial model" which questioned the dominant belief that organic pathology was the sole cause of psychological disturbances. It is significant that the founders of and early contributors to this new school of thought were psychiatrists themselves. In contrast to the traditional psychiatrist who set out to remove the symptoms of gross pathology, the psychoanalysts sought to facilitate the patient's development or reorganization of a healthier character structure. This was a definite departure from the original dichotomous orientation towards a "continuum" approach to include

something more than merely a "symptom-free" condition as the goal of treatment. Moreover, through the influence of the psychoanalytic movement, the psychodynamic psychosocial view in psychiatry has become increasingly influential and has decreased the emphasis on organic pathology (Coan, 1977, p. 70).

The second major development was the fact that psychiatrists, as well as clinical psychologists, began to observe more and more gradations of psychological disturbance which differed from "gross psychopathology". This was increasingly confirmed by experience gained from the development of community psychiatry and ambulatory services (Offer & Sabshin, 1974, p. 21) that deal with less severe degrees of disturbance than is observed in the more traditional in-patient settings.

This changing trend towards a wider view of psychological health was further influenced by a number of developments in the field of psychology.

Two important factors emerging from psychology were the development of psychological testing and the extensive and intensive study of normal and clinical populations. This began to produce a great deal of normative information; and these normative data together with test theory in general began to offer convincing evidence for the validity of the continuum approach to psychological well-being which further weakened the dichotomous viewpoint. This added more confirmation to the notion of gradations and shadings of psychological health.

An additional development in psychology was the previously mentioned emergence of the humanistic movement (subsection 1.2.1). Many psychiatrists were influenced by and eventually contributed to this movement as well. The impact of the humanistic movement on the

conceptualization of psychological health in general was that it served to expand further upon and widen the psychoanalytic view of psychological well-being. The basic theoretical implications of constructs like growth-potential and self-actualization together with extensive normative data on normal populations further supported the idea of a continuum of psychological well-being with gradations ranging from psychopathology to normal health and beyond.

Particularly since the Second World War, there has been a convergence of input into the general field of mental health. This has created a cross-pollination of ideas contributed by various elements and developments in psychiatry and psychology alike. Both of these disciplines have come closer together and have jointly begun to contribute to a clearer understanding of psychological health. Thus, psychiatry is slowly shifting from the biomedical and dichotomous approach with an emphasis on psychopathology to a more psychodynamic psychosocial orientation with more of an emphasis on normal and optimal behaviour viewed on a continuum basis.

A further contribution to this bridging between and merging of the mental health disciplines was made by the influence of sociology and anthropology. The essence of this contribution to viewing and studying psychological well-being are the impact and implications of the idea of "cultural relativity" which suggests that behaviour is relative to its particular cultural context (Benedict, 1934-a & 1934-b; Linton, 1956). Stressing the culture-bound determinants of psychological well-being, the "sociocultural model" states that normality is relative to the culture in which it occurs (Offer & Sabshin, 1974, pp. 74, 81-82).

It has become increasingly apparent that reliance on any one of

the three basic models (i.e., biomedical, psychosocial, sociocultural) is incomplete in itself. This has led to the emergence of an inter-disciplinary endeavour which calls for the integration of these models and approaches in order to gain a more comprehensive picture of psychological well-being. Thus, the problem becomes one of assessing and dealing with the particular interaction of multiple determinants as they affect the individual (Coleman, 1976, p. 81). Grinker (1969) and Kaufman (1967) argue that this "biomedical-psychosocial-sociocultural" approach to psychologoical health cannot be fractured into separate parts. The multi-determinant approach in the field of mental health in general has been strongly supported by a number of mental health professionals, theorists and researchers like Erikson (1950-b & 1959), Gedo and Goldberg (1973), Grinker (1956, p. 370; 1963, pp. 131-133), Hartmann (1939, 1960 & 1964), Kardiner (1939 & 1945), Knapp (1963), Kohut (1971), Kubie (1954), Leiderman and Shapiro (1964), Offer et al. (1972), and Offer and Sabshin (1974).

To move towards a higher level of conceptualization in this area represents a complex task for the current generation of mental health professionals requiring a concerted effort of all concerned disciplines (Offer & Sabshin, 1974, pp. 174-175). This may ultimately lead to a more unified and comprehensive concept that both transcends and integrates the various dimensions, perspectives and disciplines (Offer & Sabshin, 1974, pp. 174-179).

In conclusion, these trends indicate a definite shift from a biomedical and dichotomous to a multi-determinant and continuum approach to viewing psychological well-being.

2.2.1.2 The interest in and need for better conceptual models and assessment procedures: One of the most fundamental points of interest for the present study is that the literature reveals a dearth of adequate models of psychological well-being (Dana, 1984) and strongly echoes the need for and growing interest in better definitions and assessment methods of the full range of psychological health (Coan, 1977; Dabrowski & Joshi, 1972; Jahoda, 1958; Jantzen, 1969; Kelly, 1975; Nunnally, 1961; Offer, 1973; Offer & Sabshin, 1974; Sells, 1967).

The importance of continuing to study various dimensions of psychological well-being in an effort to develop better operational concepts is quite evident. First of all, if through such studies we become better able to conceptualize and assess "positive adaptive patterns, we may ultimately be able to design programs for promoting their development" that may prove to be important aids in various areas like child rearing (Beiser, 1971). Furthermore, Offer and Sabshin (1974, p. ix) state that in order to improve our work with primary prevention, early treatment and rehabilitation, "the time is appropriate for a consideration of what we really mean by normality." This point is supported and expanded upon by Coleman (1976, p. 3): "In order to assess, treat and eventually prevent psychological disturbances, social and behavioral scientists must work out clear definitions" of psychological well-being. Clearer concepts may also help the clinician to set meaningful therapeutic goals (Smith, 1972) and to assess progress made in therapy. Strupp and Hadley (1977) ask how are we able to evaluate changes resulting from psychotherapy if there is an absence of consensus on what constitutes psychological health: "If conceptions of mental health are fuzzier than ever, how can we determine whether a particular

intervention has led to improvement, deterioration, or no change?" Lastly, the ability to evaluate cost-efficiency in mental health practice is also dependent upon the formulation of better operational concepts. Offer (1973) suggests that the comparative analysis of the results of community mental health programmes necessitates the development of valid and reliable definitions of psychological health; the allocation of government funds to develop new programmes and maintain on-going ones increases the pressure on mental health professionals to improve methods of demonstrating their usefulness. Strupp and Hadley (1977) stress that the debate over national health insurance in many countries is only the most obvious and recent example of the growing interest of society in defining psychological health and in developing sound criteria for evaluating psychotherapy outcomes. Or, as Aldrich (1975) put it:

> As long as Jones paid me for his psychotherapy or friendship, or however he wanted to use the time I sold him, it was none of Smith's business. But when Smith's taxes or insurance premiums began to contribute to my fees, Smith's interest in what I was doing with Jones increased. In other words, Smith now expects me to be accountable in terms that he can understand.

In conclusion, it is hoped that the present study will represent an adequate response to the needs for developing better conceptual models of psychological well-being as expressed in the literature. Moreover, this study focuses on an aspect of human existence that affects everyone in one way or another and, therefore, has broad significance and importance (Giorgi, 1970, p. 86; MacLeod, 1965).

2.2.1.3 The general lack of operationally defined concepts: A number of theories of psychological well-being are not easy to understand nor do they lend themselves readily to being operationally defined and useful due to the lack of semantic and conceptual clarity. This point is exemplified in the way in which Fordham (1960, p. 237) conceptualized psychological well-being: "What is healthy, and what is not, depends upon the dynamic deintegration of the self into component structures of the ego and archetypes and the integration of them into the whole organism." The writer is not implying that Fordham's theory is incorrect or inaccurate; but when a theory is phrased in such a manner, it cannot be easily examined and is thus limited from the outset. Lack of clarity makes empirical clarification and verification difficult if not impossible; and lack of "examinability" limits, in turn, the generalization of a theory and its potential applicability and usefulness in the clinical setting. This problem is well taken up by Zeller and Carmines (1980, p. 158). They stress that in spite of the fact that abstract theories play an indispensable role in the social and behavioural sciences, they often have the limitation of not being directly observable and measurable; they argue that the systematic testing and evaluation of theories requires the use of empirical indicants designed to represent conceptual abstractions. This point was earlier addressed by Greer (1969, p. 160):

> Our creations in the world of possibility must be fitted in the world of probability; in Kant's epigram, "Concepts without percepts are empty." It is also the process of relating our observations to theory; to finish the epigram, "Percepts without concepts are blind."

The desired approach should then be to "invoke both logical analysis and empirical investigation to augment our conception" or psychological well-being (Coan, 1977, p. 4).

2.2.1.4 The paucity of conceptualization based on empirically-oriented research: Another point which became quite obvious from reviewing the literature was that only a small minority of theorists have attempted to develop their concepts of psychological well-being out of empirically-oriented research (Coan, 1974; Foreman, 1966; Grinker, 1962 & 1974; Offer, 1972, 1974 & 1975; Solley & Munden, 1962; Ueda, 1958). A few examples of such attempts will be described in detail in the following subsection (2.2.2). The empirical approach (as defined in subsection 1.1.1) to conceptualization is thought by some to be "the only way to develop the groundwork for a more operational definition of mental health" (Redlich, 1957, pp. 155-158); and Korman (1961) feels that this approach could lead us to "an empirically based conceptualization of normality having the essential character of a theoretical construct." Offer and Sabshin (1974, p. xvi) predict that the "next decade will see more theory building based on empiricism."

2.2.1.5 The general sparsity of research and methodological shortcomings: The literature reveals a general sparsity of research in the development of operational concepts of psychological well-being. This has been expressed most recently by Walsh and Shapiro (1983, pp. 4-5) who state that "there has not only been extraordinarily little research on the nature of psychological well-being in general, but the most fundamental neglect is the lack of research specifically related to methods of

conceptualizing and assessing mental health." Offer and Sabshin (1974, p. 160) feel that this area is "still a wide-open research arena" and stress that further empirical research is much needed.

Despite the fact that the literature indicates a shift towards and a need for a multi-determinant (i.e., a comprehensive biomedical-psychosocial-sociocultural model), continuum, multi-factorial and theoretically eclectic approach to the operational conceptualization of psychological well-being, the vast majority of existing concepts and studies are still very much at the psychosocial, dichotomous and uni- or mini-factorial level based on a single theoretical frame of reference.

In spite of the fact that many social and behavioural scientists are aware of the pitfalls of being too preoccupied exclusively with psychopathology (Beiser, 1971; Blatt, 1964; Redlich, 1957; pp. 155-158), the literature reveals that theories of psychological well-being are still being extrapolated from studies of clinical populations (Anastasi, 1982, p. 515; Coan, 1977, pp. 71-72; Offer & Sabshin, 1974, p. 139). The importance of studying normal populations and the full range of psychological well-being is obvious for receiving a more balanced view of psychological health and has been suggested for quite some time (Allport, 1937; Erikson, 1950-a; Maslow, 1954; Murray, 1938; White, 1952). Walsh and Shapiro (1983, p. 7) clearly express this point when they state that "probably no amount of theorizing from the study of psychological disability can give us a full picture of potential capability." Vaillant (1977, p. 51) also strongly emphasizes the importance of studying normal and healthy samples (by using a medical analogy): "If one wishes to study the natural healing process of fractures, a healthy young person is a more suitable subject than is a eighty-year old with poor nutrition and heart

disease." Moreover, Beiser (1971) argues that studies of normal populations together with clinical populations brings into sharp focus the need to consider this interplay and balance between personal deficiencies and assets. Therefore, this continued over-concern for psychopathology serves only to continue to distort the overall picture of psychological well-being by abetting the continuation of a restricted and limited view of the phenomenon and thereby preventing a more realistic and meaningful approach.

Although most theorists have attempted to look for and study unitary factors (or only a few at the most) that they thought were of paramount importance in determining psychological health, results of a number of studies and a great deal of serious rethinking in this area tend to support a mulit-factorial approach. The results of factor analytic studies such as those carried out by Wright (1971) and Coan (1974) strongly counterindicate the notion that psychological well-being is based on a unitary factor. Smith, as early as 1959, argued that we should give serious consideration to many different proposed criteria of psychological health and give up the idea of settling for a single factor. Strupp and Hadley (1977) continue this argument by suggesting that if one is interested in a comprehensive picture of the individual, assessment based on a single vantage point is inadequate and fails to give necessary consideration to the totality of the individual.

Although a number of important personality factors, like self regard and self-actualization, have generated a fair amount of research, much of it has been conducted bit by bit and piece by piece without any organized effort to relate it to some systemic view of psychological well-being; and the linkage to an organismic concept is thin and fragile

in most cases (Heath, 1983, pp. 155-156). It has been urged that a number of dimensions of human functioning be considered simultaneously, otherwise such studies have only limited usefulness and can only encourage a continued proliferation of these scattered pieces of knowledge that cannot be fitted into an integrated understanding of psychological well-being (Strupp & Hadley, 1977). To begin to grapple with the complexity of psychological health means that our approach must be multi-faceted (Heath, 1983, p. 155). The primary advantage of studying many different factors simultaneously is that the researcher can observe the degree to which they relate to one another and perhaps even reduce the list by attending to the way they cluster (Smith, 1950 & 1959). Only by considering multiple perspectives "will it be possible to derive a truly meaningful evaluation of psychotherapy outcomes" amongst other things (Strupp & Hadley, 1977). Offer and Sabshin (1974, p. 180) note that empirical investigations of the relationships among the multiplicity of factors which may contribute to psychological well-being have only recently begun.

Based upon a review of the literature, it appears extremely difficult for most mental health researchers and theorists to transcend their theoretical frames of reference. Irrespective of the reasons for dependence upon a particular theoretical grounding, the prevalent uni-theoretical approach has often proven to be a hindrance in gaining a more comprehensive view of psychological well-being. The advantage of a theoretically eclectic approach (i.e., an approach which employs more than one theoretical frame of reference in construct formation) is not just transcendence for the sake of transcendence but transcendence for the sake of creating an atmosphere of open-mindedness that may foster a better exchange of ideas from many different sources; this may ultimately lead to

an integration of different ways of thinking and perceiving. What is apparent is that every theoretical model is necessarily partial and selective, and that a combination of different models may be complementary rather than antagonistic. With a deeper understanding of different theoretical models, rather than just the one with which we are most familiar and secure, it may become possible to see commonalities by looking more closely beneath surface differences. Then it may become possible to build conceptual bridges from one to another. We may be going, or need to go, towards the development of a broader psychological theory. Walsh and Shapiro (1983, pp. 8-11) support this approach and suggest that one of the first tasks is to bring together the most advanced thinking on psychological well-being and see what can be learned from examining and comparing a wide range of descriptions and theories. This need for combining various theoretical models (i.e., the theoretically eclectic approach) is further echoed by Bierer and Williamson (1976). Shapiro (1983, p. 34) and Erhard et al. (1983, p. 137) feel that this process is already in motion and that we are currently undergoing a revolution in thinking and conceptualization. They are of the opinion that there is presently some degree of openness and a breaking down of rigid theoretical paradigms.

As can be gleaned from the above discussion, the basic problem appears to be one of insufficient and inefficient research techniques. More specifically, very few researchers have employed adequate, appropriate and comprehensive research strategies particularly tailored to studying this specific phenomenon. This will become more evident when various approaches to studying psychological well-being are compared and contrasted in subsection 2.2.2 and, especially, in section 5.3.

2.2.1.6 The uniqueness of an empirically developed multi-factorial and theoretically eclectic concept of psychological health based on a continuum approach: The writer's survey of the mental health literature failed to reveal a study which specifically set out to empirically develop a multi-factorial and theoretically eclectic concept of psychological well-being which operationally lends itself to assessing psychological health on a continuum basis. Therefore, research that attempts to develop such a concept is indeed unique and may prove to offer an important contribution to the field. The uniqueness lies in combining existing observations, theories, methodological strategies and research findings. This may then offer an appropriate response to those who are justly critical of the continued proliferation of scattered bits and pieces of isolated theories and research studies (Giorgi, 1970, p. 80; MacLeod, 1965; Sanford, 1965).

2.2.2 Specific approaches to the problem of researching psychological well-being

This subsection focuses on the specific approaches of Maslow, Jahoda, Grinker, Offer, Vaillant and Coan to researching psychological well-being. These particular approaches are discussed because they represent six major contributions to this field and best exemplify the various ways in which psychological well-being has been conceptualized and researched over the last thirty years. The specific methodological strategies employed and major findings will be reviewed in an effort to point out both their positive features as well as shortcomings. A comparison of these various approaches will situate the present study with respect to previous attempts at conceptualizing and researching this

particular field. The results of the present study together with the way in which it was conducted will be compared and contrasted with these contributions at the end of thesis in section 5.3.

2.2.2.1 Maslow's approach (1950, 1951, 1954, 1976): Maslow's research on self-actualization represents one of the earliest studies of optimal psychological health; it represents one of the first departures from focusing on psychopathology and clinical samples as a method of researching psychological well-being. His pioneering work influenced not only this specific field of research but the beginning of the humanistic movement as well as psychology and psychiatry in general.

Maslow's research strategy entailed selecting subjects recognized at the outset as people who approximated a certain ideal (i.e., his conceptualization of self-actualization) and then examining their actual characteristics in detail. Therefore, it may be defined as confirmatory rather than exploratory.

He originally began his study of self-actualizing people in 1935 by screening 3000 university students, which represented an enormous research project even by present day standards. However, this yielded only one suitable subject who met the criteria for self-actualization; he later admitted that these criteria were more suitable for an older population, which in and of itself says something about self-actualization or the way in which he conceptualized it (i.e., this factor may be more relevant or appropriate for older individuals than for younger ones).

After this initial attempt was aborted, Maslow decided to select adult subjects among personal acquaintances, friends and public and historical figures. The subjects were selected based on (1) an absence of

psychopathology (i.e., those who did not exhibit signs and symptoms of "neurosis, psychopathic personality, psychosis or strong tendencies in these directions") and (2) positive evidence of self-actualization (i.e., those who demonstrated "full use and exploitation of talents, capacities and potentialities" and who appeared to be "fulfilling themselves and doing the best they are capable of doing" and who have "developed or are developing to the full stature of which they are capable"). Also implied in these criteria was a gratification of the basic needs for safety, belongingness, love and self-respect. The Rorschach Test was employed in the screening and selection of some of the subjects who were later interviewed.

A total of 60 subjects were selected. The public and historical subjects who were studied were people Maslow admired and included individuals like Abraham Lincoln, Albert Einstein, Eleanor Roosevelt, William James, Albert Schweitzer, Aldous Huxley, Spinoza, Pablo Casals, Martin Buber, Adlai Stevenson, Ralph Waldo Emerson, George Washington, Henry Wadsworth Longfellow and Benjamin Franklin.

He then interviewed nine contemporary subjects. They were studied "as carefully as possible" in an attempt to "slowly develop a global or holistic impression of the sort that we form of our friends and acquaintances." Maslow further described his methodology as follows:

> "It was rarely possible to set up a situation, to ask pointed questions, or to do any testing with my older subjects (although this was possible and was done with younger subjects). Contacts were fortuitous and of the ordinary social sort. Friends and relatives were questioned where this was possible."

Because of the small numbers, the inconsistent methodology, and the incompleteness of data for some of the subjects, a quantitative presentation of results was not attempted. His results are presented as "composite impressions".

The findings are in the form of personality descriptions thought to characterize self-actualizing people. Based on his results, self-actualizers are individuals who: (1) are more efficient in perceiving reality and feel more comfortable in relation with it, (2) can accept themselves, others and nature, (3) are spontaneous, (4) are problem centered rather than ego centered (i.e., strongly focused on problems outside of themselves and have some mission in life or some task to fulfil), (5) have a need for privacy and are able to detach themselves to achieve this, (6) are autonomous, (7) demonstrate continued freshness of appreciation (i.e., the capacity to appreciate again and again, freshly and naively the basic goods of life with awe, pleasure, wonder and even ecstasy), (8) have had peak or mystic experiences, (9) exhibit "gemeinschaftsgefuhl" (i.e., feelings for mankind), (10) have deep and profound interpersonal relations, (11) have a democratic character structure (i.e., not authoritarian), (12) can discriminate between good and evil and between means and ends, (13) possess a philosophical and

unhostile sense of humour, (14) are original, creative or inventive, and (15) resist enculturation.

Because of the particular contemporary subjects who were interviewed, Maslow made it clear that he was unable to publicly make available the data upon which his conclusions were drawn; he, thus, admits that the research is impossible to repeat. Maslow himself was quite aware of the methodological shortcomings of his research and is almost apologetic when commenting on his unconventional methods of sampling, interviewing and validation. Commenting on this study, Heath (1983, p. 155) states that "the sheer complexity and abstractness of the qualities identified made many refractory to more objective measurement and verification." In Coan's opinion (1977, p. 194), the most serious weakness of all "is that (his approach) tends toward a kind of circularity" (i.e., the characteristics that were found were those encompassed by the initial selection criteria). Heath (1983, p. 155) is unduly severe and not entirely correct when he states that "the subjectivity of the methodology provided no acceptable scientific model to others about how one might empirically explore self-actualization" [he overlooked Shostrom's (1964) empirical study of self-actualization based on Maslow's conceptualization (subsection 4.3.1.3)].

In spite of the criticism levelled against Maslow's methodological shortcomings, "his work culminated in a rather comprehensive picture of the self-actualizer that will probably continue to stimulate the thinking of other theorists and researchers for some time to come" (Coan, 1977, p. 193). Maslow ingeniously generated an enormous amount of material that richly described self-actualizing people. The results of this pioneering work are still very relevant in describing

optimal psychological well-being today. Much of this early work was later confirmed by different and more sophisticated approaches to research as will be discussed in fuller detail in section 5.3. Taking into account when and how this work was carried out, these results are a credit to Maslow's perceptive powers and intuitive genius more than to his ability to be systematic and consistent in conducting research.

Based on the results of Maslow's research and concept of self-actualization, Shostrom (1964) developed the Personal Orientation Inventory (POI) to assess optimal psychological well-being. In a way, this was an attempt to operationalize and validate self-actualization. More than half of the scales were designed to measure the way Maslow conceptualized a few major aspects of self-actualization--e.g., (1) the SAV Scale measures "affirmation of a primary value of self-actualizing people", (2) the S Scale measures freedom to react spontaneously or to be oneself, (3) the Sr Scale measures affirmation of self because of self-worth or strength, (4) the Sa Scale measures affirmation or acceptance of self in spite of weaknesses or deficiencies, (5) the Nc Scale measures a constructive view of the nature of man, and (6) the C Scale measures the ability to develop contactful intimate relationships with other human beings. Shostrom (1964) administered the POI to 160 "normal" adults, to 29 "relatively self-actualized" and to 34 "relatively non-self-actualized" adults. The results indicated that the inventory is able to discriminate self-actualized from normal and non-self-actualized individuals. He concluded that the POI does, in fact, measure growth toward self-actualization. Various aspects of the POI will be more fully discussed in subsections 4.3.1.3 and 4.5.4.1.

2.2.2.2 Jahoda's approach (1958): As was previously stated in subsection 1.2.3, Jahoda was charged by the Joint Commission of Mental Illness and Health to review and summarize existing concepts of psychological health. This was carried out by a task force of mental health professionals under her direction. The findings were presented to the Commission and published in 1958 (Current concepts of positive mental health) together with a series of other monographs related to various other aspects of the general field of mental health.

Her purpose was to arrive at a clearer and more meaningful understanding of the meaning of psychological health. Thus, Jahoda's approach was to focus on optimal psychological well-being (or "positive mental health") rather than on the more traditional approaches of defining psychological health as "normality" (based on arithmetic averages and frequencies) or as "an absence of mental illness" (based on the lack of gross psychopathology). As such, Jahoda was one of the first researchers, after Maslow, who stressed the importance of studying optimal psychological well-being.

Jahoda adopted a theoretically eclectic orientation and emphasized a multiple criterion approach based on a psychosocial frame of reference. She also stressed the importance of sociocultural issues, especially with regard to the influence of cultural relativity and social values, in conceptualizing psychological well-being.

In her review of existing concepts, Jahoda purposely cut across theoretical boundaries in the search for the "psychological content of positive mental health." This endeavour resulted in the emergence of six major clusters which were thought to represent the essential components of positive mental health.

She described these six components of optimal psychological health as follows:

(a) Attitudes toward the self: This is described by such terms as self-acceptance and self-confidence. Self-acceptance implies that a person has learned to live with himself or herself, accepting both his or her limitations and possibilities. Self-confidence has a more positive slant and expresses that the self is perceived as basically good, capable and strong.

(b) Growth, development and self-actualization: This is an on-going process and is essentially what a person does with herself or himself over a period of time. It is and has been referred to as growth, development and self-actualization. This is in large part related to, dependent upon and stems from maturity. It is a dynamic process of striving towards maximum development and the realization of one's potentialities.

(c) Integration of personality: This refers to the relatedness of all aspects of and in the individual, to the cohesion and coherence of the personality, to the unity and continuity of the personality, to the interrelation of certain areas of the psyche and to a balance of psychic elements in the individual. Jahoda suggests that the degree of "flexibility" on the one hand and the ability to "tolerate and cope with stress" on the other are indications of the level of personality integration.

(d) Autonomy: This refers to the individual's degree of independence. She points out that autonomy often deals with the nature of the decision-making process and with its outcome in terms of independent behaviour and actions. Other terms closely related to it and at times interchangeable with it are independence, self-direction and self-directiveness, self-

reliance and self-determination.

(e) Perception of reality: The way an individual perceives the world around her or him represents an important criterion for one's psychological health. Generally, the perception of reality is called psychologically healthy when what the individual sees corresponds to what is actually there. Healthy perception of reality implies a process of viewing the world so that one is able to take in matters one wishes were different without distorting them to fit these wishes--that is without inventing cues not actually existing. The psychologically healthy person will "test" reality for its degree of correspondence to his or her wishes and fears but will not "assume" a correspondence. Perception of reality is viewed in one's concern for evidence to support what one sees and anticipates.

(f) Environmental mastery: Here, Jahoda specifies two major elements: (1) adaptation and (2) success. Adaptation and success are respectively the process and end-product of achievement in significant areas of living, with the emphasis on efficient functioning. Basically, the essence of environmental mastery revolves around positive and satisfying "interpersonal relations" and efficiency in "problem-solving". Furthermore, the ability to love, work and play is the essential measure of positive mental health in this component. This ability entails the underlying capacity to establish and maintain interpersonal relationships in which one is able to both give and receive and contribute to the well-being of the group in a cooperative and constructive fashion. The problem-solving side of environmental mastery corresponds essentially to the thinking process and, thus, may be closely related to a combination of potential intellectual capacity, present intellectual functioning, and

motivation. Successful environmental mastery leads to "general contentment and happiness" which are thus partially indicative of positive mental health.

Beyond the employment of a logical and non-statistical method of clustering and identifying these components, Jahoda did not attempt to empirically examine their "validity" and "reliability". However, she did prepare the groundwork for future studies by mapping out the territory and suggesting the "salient elements in current speculation about the optimal personality" (Coan 1974, p. 10); she also stressed the need to look for empirical indicants of positive mental health. In commenting on Jahoda's contribution to the conceptualization of psychological well-being, Vaillant (1977, p. 363) stated that her work "offers the best definition so far."

Although this monumental study is over a quarter of a century old, the mental health literature reveals only three empirical studies which directly examined her conceptualization of psychological well-being (Duncan, 1966; Wright, 1967; Wright, 1971).

Duncan (1966) developed the Personality Integration Reputation Test which is the first (and perhaps only) scale designed to examine Jahoda's conceptualization of positive mental health. This is essentially based on a reputation technique designed to identify people who possess high personality integration (integrated individuals). The scale consists of seven sociometric items that are purported to tap behaviour in Jahoda's six areas (e.g., "Who are the persons who seem best able to express their feelings without hurting the feelings of others?"). Duncan validated the scale on 1113 university students. The results indicated that the scale was successful in significantly differentiating integrated from

non-integrated individuals.

In 1967, Wright administered Duncan's Personality Integration Reputation Test to 264 university students. The results were factor analysed in order to examine the factor structure of Duncan's scale and Jahoda's concept. This yielded an extremely potent first factor which accounted for 90 % of the variance. Wright concluded that positive mental health is a single general factor which contradicts Jahoda's basic assumption. However, the small number of items (seven) in Duncan's scale feasibly obscured separateness among component parts of positive mental health and gave a spurious impression of unity among the various components of this construct. Therefore, it would be a mistake to conclude from these results that psychological well-being is based on a unitary factor. This is an example of one of the basic errors encountered in interpreting (or misinterpreting) the results of factor analysis (i.e., when the preliminary work is inadequately prepared); various other aspects related to this statistical procedure may interact with one another to create various different effects (and artifacts) making the interpretation of factor analytic results equally if not more misleading (e.g., the factoring method and type of iteration selected, the rotation employed, the number of extractions requested, etc.).

Wright repeated his factor analytic study of Jahoda's concept in 1971. He expanded Duncan's scale to include five sociometric items designed to describe behaviour in each of Jahoda's six components. These items were administered to two groups of 256 and 393 university students based on the reputation method of nominating subjects who best fit the descriptions depicted in the items (e.g., "Who are the three persons who tend to perceive things as they really are, rather than in a extreme or

distorted fashion?"). Their responses to the 30 items were submitted to two factor analyses. Four factors were extracted accounting for 72 % of the variance in both analyses. These factors are as follows: (1) Factor I (which was comprised of Jahoda's components of self-perception, perception of reality and environmental mastery) was labelled Task and Perceptual Effectiveness, (2) Factor II (which was comprised of Jahoda's autonomy and self-actualization components) was labelled Autonomy and Self-actualization, (3) Factor III (which was composed of items designed to tap Jahoda's integration and autonomy components) was labelled Commitment, and (4) Factor IV (which included items designed to tap Jahoda's self-perception and self-actualization as well as perception of reality) was labelled Openness. Based on his results, Wright concluded that although Jahoda's six component structure was not supported as was originally conceptualized, positive mental health was definitely not a unitary factor which contradicted his earlier findings (Wright, 1967). It is the writer's opinion that Wright would have received different and more theoretically meaningful results if he initially were to have broken down Jahoda's fairly heterogeneous components into more homogeneous ones and then employed more than five items to describe them.

2.2.2.3 Grinker's approach (1962, 1963, 1974): Grinker has stressed the importance of defining psychological well-being for many years. In spite of his medical and psychoanalytic background, he has strongly emphasized the need of adopting a multi-determinant (i.e., an expanded biomedical-psychosocial-sociocultural model) and theoretically eclectic approach. Rather than studying clinical populations as has traditionally been the case, especially in psychiatry, or self-actualizing individuals

as was attempted by Maslow and others, he was one of the first to study ordinary people who possess average psychological health (i.e., the "homoclites" as he neologistically refers to them). This approach added a new, different and perhaps better perspective in exploring the dimensions of psychological health (i.e., rather than focusing primarily on the pathological or the very healthy extremes of the continuum); as such, Grinker's study represents an important advancement in this field.

His research approach can be described as exploratory and descriptive (i.e., he did not set out to confirm a theory or test a hypothesis related to the nature of psychological well-being).

Grinker's research began as a cross-sectional study in 1958 and culminated in a 14 year follow-up of 57 % of his original sample. His data were obtained by means of interviewing (including the use of a general adjustment rating scale) and questionnaires. He offers the description of these subjects as a tentative (descriptive) definition of psychological health.

In 1958, Grinker screened more than half of the student body at a small Chicago university by employing the Taylor's Manifest Anxiety Scale, Mandler's Perception of Feeling, Barron's Ego Strength Scale, and Nowlis' Adjective Check List. This was originally designed to select a healthy control group for research being conducted by him on schizophrenics. The screening process yielded 31 subjects who fell within the average or healthy range on all of the four tests.

These people were all interviewed by Grinker for approximately one hour. The first part of the interview was unstructured; he encouraged them to speak freely and openly about themselves, their worries, anticipations, goals and anything that they wanted to discuss. The second

part of the interview was more structured; they were asked to talk about special topics such as their background, love life, school, emotions, self image and so forth. This method represents an advancement of that employed by Maslow who used only an unstructured approach. Not only did Grinker combine both an unstructured with a more structured type of interview designed to tap specific areas, but interviewing was only one of several methods that he employed to collect data which was not the case with Maslow who relied primarily on the unstructured interview. The interview yielded information in the following areas: (1) socioeconomic background of family, (2) general development and physical health, (3) capacity for verbal behaviour, (4) kinds of usual interpersonal relations, (5) range of feelings, (6) ease of emotional arousal and shifts of feelings, (7) degree of affective response to stressful situations and recovery or defences, (8) familiarity and comfort with one's own feelings, (9) cognizance of physiological concomitants of feelings, (10) ability to report feelings and self-image, (11) freedom of play, fantasies and dreams, (12) anecdotes of past emotional disturbances (in order to reveal the intensity and nature of precipitating factors and the recovery process), (13) presence and type of impulsive behaviour, (14) character and personality structure and defences. In addition to general information received from the interview, Grinker also completed a rating scale designed to describe general adjustment and psychopathology (a modification of Lorr's Psychiatric Rating Scale).

A 700-item questionnaire was later constructed and administered to all of the male students who were entering university for the first time (N=80). The questionnaire was intended as a check on the findings elicited by the interviews and as a means of completing the data covering

their families and social and cultural backgrounds. It covered the following 18 areas: (1) vital statistics, (2) home and family, (3) childhood, (4) adolescence, (5) schooling, (6) discipline, (7) religious training and attitudes, (8) physical health, (9) hobbies, recreation and social life, (10) sex, (11) stresses, disappointments and troubles, (12) prejudices, (13) relationship to authority, (14) expectations, ambitions and values, (15) neurotic traits, (16) evaluation of self, (17) emotionality, and (18) marriage and children. An additional scale measuring neuroticism was constructed based on a number of the questionnaire items.

In addition to the 31 subjects initially screened and interviewed, 34 additional subjects from the 80 new male students who completed the questionnaire were also interviewed.

Based on the results from the interviews and questionnaire, most of these 65 subjects were described by Grinker as psychologically healthy (i.e., free from psychotic, neurotic or disabling personality traits). They were thought to possess average intelligence. Their self-image was described as realistic. They were seen as generally reacting to external stimuli with mild affective responses of anxiety, depression and anger; however, these responses were rarely "spontaneous" (i.e., internally evoked). The subjects were able to use coping devices which were considered to be rapidly stimulated and effective against affective arousal; the major defences employed were muscular action (i.e., doing something physical), denial and withdrawal. They showed interest in physical activities and athletics more than cultural events. They exhibited little introspective capacity ("communication with self") and low degrees of fantasy, regression or creativity. There was evidence of

fairly strong impulse control. Failure in competitive sports and school examinations would arouse moderate anxiety. These people were described as possessing high degrees of ethics, morality and honesty. And finally the results revealed that most of the subjects demonstrated a good capacity for warm human relationships.

Grinker suggests that there is a connection between the above-mentioned characteristics of the homoclites and their backgrounds which was supported by additional findings. Thus, he attempted to explore the way in which factors related to psychological health develop. It was revealed that they possessed constitutionally sound physical health from birth. There was evidence of satisfactory positive affectionate relationships with both parents. Both parents agreed and cooperated in child-rearing, and definite and known limitations and boundaries were placed on behaviour. Moreover, there was parental emphasis on control, and punishment was described as reasonable and consistent. They received fairly strict and early religious training and exhibited an early work history. Adolescent rebellion was described as moderate. They received early and consistent messages that one does something about problems (i.e., some sort of constructive action is taken). The life-plan message (or script) included: (1) being sociable, content and doing good; (2) goal-seeking, rather than goal-changing; (3) concern for success for what one chooses to do rather than ambition for prestige, social advancement or wealth. Their fathers were seen as suitable models for masculine identification. Finally, the progression from one developmental stage to the next was not viewed as problematic.

Fourteen years later, these 65 subjects were posted a second questionnaire as a follow-up study aimed at examining the general state of

their psychological health. The 1972 questionnaire was constructed as an instrument employed to study the clinical phenomena of schizophrenia as part of an on-going research project conducted by Grinker. This questionnaire was primarily designed to tap psychopathology. Out of the 65 subjects who initially participated in the research project in 1958, 37 completed the second questionnaire. The analysis of the data was based on the comparison of ten items from both questionnaires which appeared to tap similar areas; however, a review of these items suggests that the degree of comparability is questionable (this point is raised by Grinker himself). Grinker concluded that the results of the follow-up study indicate increased ego-functioning and maturity; this is based primarily on what he described as maturation in father-son relationship, the lack of evidence suggesting scattered and clogged thoughts, and growth in the direction of closeness.

He concluded that the homoclites of 1958 maintained sound psychological health in their thirties. Grinker also supported this conclusion by pointing out that most of them were married, had children and were successful in their jobs.

He did not carry out a factor analysis of the data obtained. Furthermore, there was no attempt to examine the degree of significant difference between the homoclites and individuals assessed as possessing higher and lower levels of psychological health with respect to those characteristics which were revealed.

Both sample sizes (in the first and second parts of the study) are small; this together with the specific nature of the sample studied makes the generalization of results questionable.

The major achievements of Grinker's study are seen in not only

his systematic method of screening and data collection, but in the fact that he was one of the first researchers to conduct a longitudinal study of average psychological health and explore the involvement of various developmental factors. Although he used very simple statistics in describing and presenting his results and in spite of relatively small sample sizes, his work represents one of the first attempts to empirically study psychological well-being.

2.2.2.4 Offer's approach (1972, 1974, 1975): Offer was influenced by Grinker's study of normal subjects (1962, 1963 & 1974) and adopted a similar but more sophisticated orientation in his research; in addition to continuing the advancements made by Grinker, he improved the overall approach to studying psychological well-being in general. Like Grinker, Offer views psychological health as dependent upon an integration and interrelation of biopsychosocial variables over a period of time. Thus, his approach is multi-determinant relying on a biomedical-psychosocial-sociocultural model, which he refers to as "normality as transactional systems". Offer did not start out from or work within a particular theoretical framework nor did he set out to examine a particular theory or even an a priori theoretically eclectic conceptualization of what he thought psychological health was; rather, he set out to observe development and attempted to identify various types of behaviour and developmental styles (or patterns of development). He focused on normal subjects (i.e., "typical" North American middle-class, suburban adolescent males), who were neither psychiatric patients, delinquents nor those who have achieved special visibility through their actions in other areas.

Offer conducted an eight-year longitudinal study from early

adolescence to young adulthood (14 to 22 years of age). This was carried out by studying 73 subjects for four years up until graduation from high school and following up with 61 of these people for a four year period subsequent to graduation.

He began his longitudinal study of normal development in 1962 by administering the Self-image Questionnaire (designed to evaluate adolescent functioning in multiple areas) to 326 first year high school students (age 14) in two suburban Chicago high schools. Based on the results, he selected those adolescents who fell within one standard deviation from the mean in at least nine of the ten scales--i.e., those functioning primarily at a middle range in most areas of personal and social adjustment. His aim was to select what he called a "modal" male population sample (i.e., Grinker's "homoclites"). Teachers' and parents' ratings of the adjustment of prospective subjects were also used as a way of checking the results of the Self-image Questionnaire. This resulted in the selection of 73 subjects.

The main instrument for collecting data was a semi-structured psychiatric interview. The subjects were interviewed once between the ages of 15 and 16, three times between 16 and 17, twice between 17 and 18, once between 19 and 20, and once between 20 and 21 years of age. Data were also collected through self-rating reports designed to tap general adjustment and ego-identity; this was carried out between the ages of 19 and 20 and again between 21 and 22. Sociologists were employed to conduct survey-type interviews of the subjects and their parents between 15 and 16 and again between 17 and 18 years of age. Data were also collected from teachers' ratings once at 15 to 16 and again at 17 to 18 years of age. Finally the Wechsler Adult Intelligence Scale, the Thematic Apperception

Test and the Rorschach Test were administered at 16 to 17 and again at 20 to 21 years of age.

It is important to note that a follow-up study was conducted after high school matriculation on 61 subjects out of the original 73, 50 of whom were interviewed and only 41 tested.

Data collected from the above sources were related to behaviour, feelings, background and psychodynamics; this information was studied in order to determine patterns of development. Data were first presented in terms of frequency counts, averages and intercorrelations. Offer then factor analysed 55 central variables which yielded ten primary factors; however, other than presenting the factor loadings on the extracted factors, no attempt was made to interpret or identify them.

Based on typal analysis, Offer arrived at three sub-groups which he presented as three different types of "developmental route patterns" from young adolescence to young adulthood. These routes are labelled (1) continuous growth, (2) surgent growth and (3) tumultuous growth. He views the qualities of the continuous growth route as representing psychological health (or, perhaps better, optimal psychological well-being); tumultuous growth is more in the direction of potentially poor psychological well-being whilst the surgent growth route falls somewhere in the middle.

The following is a general description of those individuals who fall within the developmental scheme of the continuous growth route (i.e., optimal psychological health). These individuals appeared to have progressed smoothly from adolescence to adulthood with a sense of purpose and self-assurance toward a meaningful and fulfilling adult life. They exhibited a genetic and environmental background which was not problematic

in nature. Their childhood was unmarked by death or serious illness in the family. Their nuclear family remained stable in childhood and adolescence. These people appeared to have mastered previous developmental stages without serious setbacks. They were successful in coping with problems that arose through an adaptive combination of reason and emotional expression; they also exhibited a capacity to integrate experiences and make use of them for continual growth. In most cases, their parents gratified basic needs and encouraged independence; and basic mutual respect, trust and affection was evident between the generations. These people demonstrated good object relationship; they had close male friends on the one hand and were increasingly moving toward the opposite sex and striving towards intimacy in their relations on the other hand. These people acted in accordance with their consciences and exhibited little evidence of superego problems. Fantasy lives were relatively active but almost always giving in to reality and action; their behaviour was guided by a pragmatic and realistic appraisal of their own abilities and of external circumstances. These individuals were able to cope with external trauma through an adaptive action-orientation and to employ ego defence mechanisms like denial, isolation and suppression (more than repression). They were able to postpone immediate gratification and work in a sustained manner for future goals. They were also successful in responding to their aggressive and sexual impulses without being overwhelmed or acting-out. Prolonged periods of anxiety or depression were not experienced. What was most distinctive about members of the continuous growth group was their overall contentment with themselves and life--i.e., they appeared to be relatively happy human beings.

It is the writer's opinion that more than any other researcher,

Offer has advanced the study of psychological well-being in both the level of methodological sophistication employed as well as in the comprehensive and descriptive nature of his results. The outstanding aspects of his work are the very elaborate screening process, data collection procedure and level of statistical examination employed; furthermore, he longitudinally studied (with one to two year prospective follow-ups) psychological health from early adolescence to young adulthood. Lastly, Offer's extensive results reveal one of the most comprehensive pictures to date of the nature of psychological well-being.

2.2.2.5 Vaillant's approach (1971, 1975, 1976, 1977): Vaillant has been very much in the forefront amongst those who have strongly emphasized the need to operationalize and empirically examine concepts of psychological well-being.

He began by defining psychological well-being as the "successful and effective adaptation to life" which is seen in "the way in which individuals alter themselves and the world around them" based on the employment of "mature levels of ego defense mechanisms".

He devised an hierarchy of 18 ego defense mechanisms. This approach was derived from psychoanalysis (specifically from the works of Anna Freud, Percival Symonds, Arthur Valenstein, Elvin Semrad, Otto Fenichel and Lawrence Kolb). In spite of its psychoanalytic origins, Vaillant does not differentiate between defensive (i.e., pathological) and coping (i.e., eupsychic) mechanisms. This hierarchy orders defences along a continuum that is purported to reflect psychological health. These specific ego defense mechanisms were selected according to their relative indication of maturity and pathology as is theoretically implied. The

defences are arranged from the more immature and pathological to the more mature and healthy as follows:

LEVEL I Psychotic Defences: (1) psychotic denial, (2) delusional projection and (3) distortion (of external reality).

LEVEL II Immature Defences: (1) fantasy (denial through fantasy), (2) projection, (3) passive-aggression (masochism, turning against the self), (4) hypochondriasis and (5) acting-out (enactment of conflict).

LEVEL III Neurotic Defences: (1) intellectualization (includes isolation, undoing and rationalization), (2) repression, (3) displacement (including phobias and conversions), (4) reaction formation and (5) dissociation (neurotic denial, counter-phobia).

LEVEL IV Mature Defences: (1) sublimation (regression in service of ego), (2) suppression, (3) anticipation (affective rehearsal of future pain), (4) altruism and (5) humour (as distinct from wit).

He proposed that the maturation of individuals is accompanied by the evolution of their adaptive processes from those of Level I into Level IV. Vaillant hypothesized that the choice of ego defense mechanisms and sequential mastery of the Eriksonian life cycle correlate with psychological health. Therefore, his general approach is more confirmatory than exploratory and applied to a specific psychosocial model of psychological health which is grounded in a particular theoretical frame of reference (i.e., it is not theoretically eclectic).

He then employed empirical methodology (including semi-quantified techniques of a statistically simple nature) to confirm his hypothesis

and validate his concept of psychological well-being.

Vaillant studied 95 second year male university students from among 268 who were initially selected by the Grant Study of Adult Development between 1938 and 1942. These students were selected after the university health services and the Dean's Office considered them to be "comparatively free from emotional, physical and academic difficulties." The subjects were intensively studied over a 30 year period (i.e., a prospective follow-up was made every two years from the age of 18 to 48). Vaillant stresses that behaviour studied over a long period of time (i.e., longitudinal studies) offers a better index of psychological health than pencil-and-paper tests or assessment based on a single interview (i.e., cross-sectional studies). It was reasoned that after 30 years, the psychologically healthier individuals should be discernable from the less healthy.

The subjects were initially examined at the age of 18 by internists, physiologists, psychiatrists, psychologists and anthropologists from the Grant Study of Adult Development. This included a lengthy and complete physical examination, medical history, somatotyping, clinical interview, psychological testing, and life history. They were then independently interviewed by three observers; their parents were also interviewed in order to obtain a more in-depth description of the subjects and their immediate families including grandparents, aunts, uncles and first cousins. The subjects were reinterviewed at the age of 31 and again at 47 (by Vaillant); these were semi-structured interviews aimed at gathering various information about the subjects' family, marriage, sex life, career, and value systems. They also completed questionnaires every two years which were comprised of both forced choices

and open-ended biographical questions designed to tap a wide variety of information related to their personal lives (e.g., marital relations, career satisfaction, leisure activities, health, substance abuse, political views, and so forth).

After information specifically related to their behaviour during stressful periods of their life was summarized, judges independently and blindly identified and rated defensive styles (i.e., the level of maturity of the ego defense mechanisms employed). They were supplied with a list of the 18 ego defense mechanisms which were operationally defined. Their ratings were then correlated with (1) an independent measure of general adult adjustment (based on the information which was prospectively gathered over 30 years, which was used to identify a high adjustment group of 30 subjects and a poor adjustment group of 30) and (2) an independent measure of psychopathology.

A strong correlation was demonstrated between the subjects' choice of defensive style and the level of adult adjustment ($r=-.65$) and between the measure of psychopathology ($r=-.35$).

It was concluded that the relative maturity of defensive style provides an independent means of assessing psychological health and that an hierarchy of defences can be used to predict adult growth and define psychological well-being. Vaillant concludes that "characterological adaptive styles appear to determine whether environmental stress produces madness or 'pearls'" (1975) and that highly significant shifts in defensive styles occur as the individual matures.

In conclusion, the most outstanding aspects of Vaillant's work are his emphasis on the continuum of psychological health, the fairly high level of operational definition obtained, the intricate data

collection procedure employed and, most of all, his very intensive 30-year longitudinal study of psychological well-being from young adulthood to middle age with prospective follow-ups every two years.

2.2.2.6 Coan's approach (1974, 1977): Coan's approach to researching psychological well-being is primarily based on the employment of multivariate analysis. He stresses the importance of assessing large numbers of personality variables in large samples and then applying factor analysis in order to examine the relationship of the variables being studied. Such an approach is capable of panoramically revealing basic dimensions of psychological well-being which are not revealed so clearly and extensively in most other approaches. Applied to the numerous and various personality variables embraced by existing concepts, it can offer a much clearer picture of the overall nature of the domain and identify those aspects that go together and those which do not. Although this approach has been applied in studying the structure of personality (e.g., Cattell and Guilford), he is probably the first to apply it to the study of psychological well-being. His approach is based on a psychosocial model of psychological well-being, theoretically eclectic in nature (i.e., it is not grounded in a particular theoretical foundation) and is exploratory rather than confirmatory in orientation.

Coan constructed a six-hour battery of tests including more than 25 separate instruments, most of which were specifically constructed for his research. The battery was designed to tap a wide variety of variables that were purported to be related to psychological well-being. It included measures of phenomenal consistency, cognitive efficiency, perceptual organization, the experience of control, the scope of

awareness, openness to experience, independence, the experience of time, reality contact, self-insight, logical consistency of the attitude-belief system, and various other aspects of attitudes, beliefs and adjustment. In spite of the methodological sophistication of this battery, no direct observations of these various variables through interviewing or other-observer ratings were attempted in his study. Furthermore this study was cross-sectional with no attempt to conduct follow-up or longitudinal studies.

The battery was group administered to 361 university students (170 males and 191 females) at the University of Arizona in 1967; most of the subjects were volunteers from elementary classes in psychology. He factor analysed 123 key variables from the battery using scores obtained from 291 subjects.

A total of 19 obliquely related factors were extracted and labelled as follows (the first 11 were considered by Coan to be the most clearly defined and meaningful): (1) distress proneness; (2) object orientation versus personal orientation (Buberian I-it versus I-thou relationships; impersonal and incongruence with social environment versus a sensitive concern for others); (3) liberalism versus conservatism; (4) openness to experience; (5) acceptance (an accepting attitude to the immediate situation, toward people, varied views of right and wrong, ideas); (6) pessimism versus optimism; (7) deliberateness versus spontaneity; (8) ideational fluency (willingness to comply and produce maximally); (9) extraversion versus introversion; (10) general intelligence; (11) responsibility (the ability to assume control over one's life and events in one's immediate world and to accept the responsibility for doing so); (12) analytic versus global orientation;

(13) organized simplicity versus uncontrolled complexity; (14) self-dissatisfaction versus self-satisfaction; (15) scope of early memory; (16) conceptual elaboration versus preference for constancy; (17) openness to unreality; (18) age stabilization; and (19) aesthetic versus practical interest. Not only are some of these labels unclear, but the factors themselves were not defined or described in any great detail; this creates some degree of confusion. For example, it is not clear what is meant by some of the labels (e.g., age stabilization) and how these factors are related to psychological well-being; and it is not always obvious which end of the continuum is the psychologically healthy one (e.g., analytic versus global orientation).

Coan's results, like those of Wright (1971), strongly refute the oft stated notion that there is an unitary dimension common to the general domain of psychological well-being. More succinctly, he concludes that there is nothing that can be considered to be a general single factor. Rather, he argues that the domain of psychological well-being encompasses a number of fairly independent classes of personality variables. Furthermore, he stresses that because there is no general dimension of ideal versus non-ideal characteristics, one cannot meaningfully order people along a linear continuum of psychological health.

Coan did not examine the validity and reliability of the 19 factors. Furthermore, there is no empirical demonstration of the level of social desirability response bias of the extracted factors. Therefore, it is not possible to say to what extent these factors are tapping what they are thought to tap and to what extent they are consistent and stable over time. Moreover, there is no indication of the ease or difficulty with which they can be assessed nor to what extent they are able to distinguish

various levels of psychological health. Therefore, applicability in the clinical setting is difficult to evaluate.

The outstanding feature and advantage of Coan's study is that it is one of first serious attempts to factor analytically study the structural components of psychological well-being by examining numerous personality variables on a large sample of both male and female subjects.

2.3 THE EMERGENCE AND DEFINITION OF THE KEY PERSONALITY FACTORS THOUGHT TO BE RELATED TO PSYCHOLOGICAL WELL-BEING

As a result of summarizing the general issues involved in as well as specific approaches to conceptualizing and researching psychological well-being (subsections 2.2.1 and 2.2.2), a vast number of variables purported to be related to psychological health were reviewed. This survey of the mental health literature confirmed the writer's earlier observations from his clinical experience (subsection 1.2.2)--i.e., similar types of variables were being focused upon irrespective of the various ways in which they were labelled and described. It was thought that these variables could be reduced to a smaller number of key factors which could then be operationally defined in order to gain a clearer picture of the structure and major components of psychological well-being.

This section presents the method which was employed to cluster those key personality factors thought to be related to psychological well-being, the way in which those factors were operationally defined, and the actual clusters that emerged together with the definitions which were developed.

2.3.1 The method employed in clustering the personality factors in the literature

The clustering of key personality factors thought to be related to psychological health which appear in the literature represents a major step in formulating the *a priori* concept of psychological well-being to be examined in the present study; this follows and was influenced by the writer's clinical experience.

The initial task was to examine those variables purported to be related to psychological health. This is similar to Jahoda's general approach (subsections 1.2.3 and 2.2.2.2).

Theories and studies were examined which focused on personality variables purported to be associated with average (or normal) and optimal psychological health as well as with psychopathology. In addition to those cited in subsection 2.2.2, other works were reviewed, some of which are referred to in subsection 2.3.3. This was done for a number of reasons. First, it was a way of identifying as many different personality variables as possible thought to be related to overall or general psychological well-being. The rationale was that similar variables or personality characteristics were expected to be described at various "points" along this continuum. Secondly, it was a way of being as thorough and systematic as possible in teasing out most if not all of the general personality characteristics relevant to psychological well-being. Furthermore, this approach was in keeping with one of the motivating factors for conducting the study (i.e., breaking away from previous approaches which primarily focused on the psychopathological side of personality and psychological health). It was hoped that this method would decrease the danger of obtaining a potentially distorted view of

general psychological well-being. This had the possibility of expanding upon the older and narrower dichotomous orientation (i.e., "either mental illness or normality") rather than rejecting it which would also run the risk of distortion. It was felt that only by putting together all possible "bits and pieces" of personality information along the continuum would a more complete and comprehensive picture of psychological well-being be achieved.

The actual method of grouping was based on a logical and non-statistical type of clustering of personality components of the theories and studies that were reviewed. This proceeded from (1) analysis to (2) grouping and finally to (3) labelling. Numerous theories and studies were first analysed in an effort to identify their structural components. The components (i.e., personality or personal variables, characteristics, attitudes, life styles, etc.) were then grouped together based on similarity and likeness (e.g., independence, autonomy, self-directiveness, etc.). Later, these groupings of similar and like variables were labelled (i.e., given an appropriate name that represented that particular group containing similar characteristics). For example, the name "self-actualization" was given to a group or cluster of similar characteristics that were referred to by such terms as self-actualization, self-fulfilment, becoming, self-realization, and so forth. These groupings (or clusters) were made as independent from one another as possible; those that were too heterogeneous were further broken down into more homogeneous ones while very similar clusters were collapsed into one. This approach is similar to that of Jackson (1974, pp. 14-15) who suggests that the delineation of boundaries between dimensions is an "explicit attempt to build in a degree of discrimination" between

components from the outset "so that optimal conditions for identifying convergent and discriminant validity will prevail later." And when referring specifically to test construction, Anastasi (1982, pp. 116-117, 174) stresses the desirability to construct several relatively homogeneous tests each designed to cover a different aspect of a heterogeneous phenomenon. Statistical procedures would eventually be employed to examine more closely the internal cohesion of these clusters (i.e., mathematical models of likeness and fitness like item analysis and factor analysis would be used to examine the degree of accuracy in the above mentioned approach to logical and non-statistical clustering). From a statistical point of view, this method of logical clustering is considered sound preparatory work for a factor analytic study of the purported factors thought to be related to a structural concept like psychological well-being (Mulaik, 1972, pp. xii-xiii).

The above mentioned combination of logical clustering and statistical examination represents an essential aspect of the strategy employed in the present study. This stage of the research strategy is similar to what Loevinger (1957) called the "substantive" phase which sets the ground work for the "structural" (i.e., internal consistency) and, later, the "external" phase (of validation).

What eventually emerged from the above procedure were eleven clusters or areas of personality characteristics (factors) thought to be related to general psychological well-being. These areas are as follows: (1) self regard, (2) interpersonal relationship, (3) social responsibility, (4) independence, (5) flexibility, (6) problem-solving, (7) assertiveness, (8) reality testing, (9) stress tolerance, (10) self-actualization, and (11) happiness.

2.3.2 The method of operationally defining the factors

The process of defining these eleven personality areas represents the next stage in formulating the a priori concept of psychological well-being and is an important phase in the overall strategy of the present study. The importance of this phase is stressed by Jackson (1970, p. 64).

An attempt was made to select a definition or create a composite definition for each of the personality areas using the mental health literature as the main reference source; the majority of these definitions turned out to be of the composite type (i.e., definitions created by combining various aspects of more than one definition) which has been used and recommended by Jackson (1970, p. 67; 1974, p. 15).

One of the general aims was to be as comprehensive as possible by trying to incorporate the most important aspects of each area based on the various contributions made by numerous mental health theorists and researchers over the last half century. Another important aim was to define these areas as clearly and operationally as possible and to make them as mutually exclusive as possible. This was thought to be an important feature of the overall research strategy for two main reasons. Not only would this be important for the immediate task of formulating the a priori concept, but it would also aid the process of generating and selecting items to be used in the experimental inventory designed to study the personality components of such a formulation which will ultimately lead to an a posteriori concept of psychological health. Before writing the items for the Personality Research Form, Jackson also found it necessary to develop mutually exclusive definitions of each factor (1970, p. 67). This is an attempt to strengthen the foundations of the

substantive component of validity from the onset which will be examined by statistical procedures later on (Loevinger, 1957); this is primarily directed to the issue of strengthening content validity which increases the possibility of obtaining good construct validity. Lastly, an attempt was made to avoid professional and theoretical jargon in order to create clearly worded and comprehensible definitions. Hence, definitions which were too abstract, esoteric and cryptic were rejected. An example of a definition that was thought to be too difficult to operationalize was that of Fordham (1960, 237) which was discussed in subsection 2.2.1.3.

The next step was to have these eleven definitions reviewed by two mental health professionals (i.e., two males with doctorates in psychology and approximately ten years of clinical experience). Their comments were primarily directed to the "lengthy and clumsy" style of some of the definitions which most likely resulted from an effort to make them as comprehensive as possible (i.e., to include too much). Their suggestions were taken into consideration in additional editing which resulted in the shortening of some of the definitions by deleting the less important aspects. A few factors, especially reality testing, proved to be very difficult to operationally define as a whole and to break down into clearly separate sub-components; the difficulty of later generating and selecting items for as well as validating some of these factors is partly related to this problem.

It is important to note that the writer made use of his clinical experience when editing the definitions; this general approach of combining personal experience, logical considerations, the mental health literature and eventually the results of a number of appropriate statistical procedures was used extensively throughout the study.

2.3.3 An overview of the personality factors that emerged and the definitions which were developed

2.3.3.1 Self regard: Jahoda (1958, pp. 22-25) emphasizes self-acceptance and self-confidence as the primary components of self regard. She states that self-acceptance implies that a person has learned to live with himself or herself "accepting both the limitations and possibilities that are found within oneself" (1958, pp. 22-25). This was previously expressed by Maslow (1950): "People with healthy personalities can accept themselves and their own nature without chagrin or complaint or, for that matter, even without thinking about the matter very much." These people "can accept their own human nature with all its discrepancies from the ideal image" without feeling real concern; they "can take the frailties and sins, weaknesses and evils of human nature in the same unquestioning spirit that one takes or accepts the characteristics of nature" (Maslow, 1950). Mayman (1955) conceptualized self-acceptance in a similar manner as "a successful synthesis by the individual of all that he has been and done, with all that he wants to be and do, with all that he should and is able to be and do, without his disowning any major feelings, impulses, capacities or goals in the interest of inner harmony." He refers to this aspect of self-acceptance as "an intact sense of selfhood" which implies knowing who one is. Jahoda (1958, pp. 22-25) also deals with this aspect and states that "a healthy person knows who he is and does not feel basic doubts about his inner identity." This point was also taken up by White (1952) and Petroni and Griffin (1969) as an important prerequisite of psychological health.

Jahoda (1958, pp. 22-25) views self-confidence, the second

basic element of self regard, as having "a more positive slant" than self-acceptance. She feels that self-confidence implies that the self is "good", capable and strong. Jahoda as well as Beiser (1971) believe that feeling sure of oneself is dependent upon "self-respect" and self-esteem. May (1954) also focuses on self-esteem and a sense of one's own worth. Definition: The ability to view oneself as basically good and to be able to respect, accept and feel confident with oneself.

2.3.3.2 Interpersonal relationship: Russell (1969), Ostow and Cholst (1974) and, especially, Fromm (1941, 1947 & 1955) have emphasized the prime importance of interpersonal relationship for psychological health.

The literature points to four basic aspects of interpersonal relationship: (1) the ability to accept and respect others, (2) the ability to establish and maintain relationships, (3) the capacity for mutually satisfying relationships, and (4) the ability to give and receive affection and intimacy.

Alonso (1961) emphasizes the ability to accept and respect others as the basis for interpersonal relationship. The importance of accepting others was also emphasized by Maslow (1954): "The well-adjusted person takes others for what they are."

McAllister (1968) focuses more on the degree of success or failure in establishing and maintaining interpersonal relationships as a key factor in psychological health: "Mental health is related to the satisfactory establishment and relative endurance of adequate personal relationships, (while) mental illness is social alienation and an incapacity for mutual relations." Similarly, Jahoda (1958) stated that "one aspect of positive mental health consists of the absence of

alienation from others." This ability to establish and maintain relations is also stressed by Phillips (1967) and by Silverman (1970) who states that "mental illness is an inability to build or maintain satisfactory interpersonal relationships or (very simply) general trouble in making and keeping friends."

Adams (1964) focuses more deeply on the "nature of interpersonal acts" which is manifested in "what the individual person is doing or communicating to others by word and deed." Not only should this interaction be "personally satisfying" (Jones, 1942) but mutually satisfying and beneficial as well (Conrad, 1952). Within this context of the characteristic nature of the interpersonal relations, Beiser (1971) emphasizes the ability to establish and maintain intimate relationships. According to Maslow (1954), the "well-adjusted person is able to have deep, close relationships with a chosen few." Others like Ginsburg (1955) and Luborsky (1962) also emphasize affection, warmth and intimacy as important aspects of the quality of human relationship and psychological well-being.

Definition: The ability to accept and respect fellow human beings and to establish and maintain adequate and mutually satisfying interpersonal relationships. "Adequate" refers to not merely the number and frequency of social contacts but, more importantly, to their depth and nature. This means the ability to give and receive affection and intimacy in one's interpersonal relationships.

2.3.3.3 Social responsibility: This area evolved out of the initial form of the interpersonal relationship factor which was thought to be too heterogeneous in that it originally included not only the ability to form

and maintain deep and satisfying relations but also the way in which one relates to his or her social group or to society in general on a less person-to-person basis. In the end, two separate and more homogeneous areas were created; one (interpersonal relationship) focuses more on a person-to-person relationship whilst the other (social responsibility) focuses on one's relationship to his or her social group.

The literature reveals a number of contributions to this area that deal with accepting social responsibility on the one hand and the ability to be a cooperative, constructive and contributing member of society on the other hand.

Saul and Pulver (1965, pp. 6-22) argue that psychological well-being can be evaluated by assessing the ability to accept social responsibilities. Alonso (1961) suggests that positive social conduct and the ability to live together "are dictated by a good understanding of our own and other people's duties and rights."

The ability to accept social responsibilities is related to an interest in and increasing capacity to give and enjoy giving and in responsible social cooperation versus fight-flight behaviour when relating to one's social group (Saul & Pulver, 1965, pp. 6-20). Blau (1954) stresses a similar point: "The mentally healthy individual is one who gets along well in his physical and social environment and accepts the customary restrictions of society without clashing with these limitations." Seen from the other end of the continuum, Tousignant and Denis (1977) conclude from their research that violent behaviour and, to a lesser extent, social withdrawal are two main indications of psychopathology.

The importance of social participation and the ability to

contribute are strongly emphasized by Adler (1939), May (1954) and Phillips (1967). May spoke of an "experience of community" which begins with first finding one's own self-value and self-worth and "then going in the direction of community with one's fellow men." One must be able to experience oneself as a contributing person in the community and "receive the simple satisfaction in "producing something of value for the community" (May, 1954).

Definition: The ability to demonstrate social responsibility and to experience oneself as a cooperative, contributing and constructive member in one's social group.

2.3.3.4 Independence: Jahoda (1958, pp. 45-46) describes independence as a type of relationship between the individual and the environment which entails making decisions as to what the person wishes to accept or reject. Healthy decision-making is based on internalized standards and results in independent actions. Jahoda's view of this purported component of psychological health is similar to that of Foote and Cottrell (1955, p. 55) who suggest that one is independent to the extent that one maintains "a stable set of internal standards for his actions, to the degree that he is self-directed and self-controlled in his actions."

This decision-making process of accepting and rejecting was earlier put forth by Riesman et al. (1950). They suggested that the degree of independence manifests itself in going along with the world as well as in opposing it: "Autonomous persons are those who on the whole are capable of conforming to the behavioural norms of their society, but who remain free to chose whether to conform or not."

Moreover, the aspect of regulating independent behaviour from within was taken up by Hartmann (1947, pp. 363-391) who wrote about a "growing independence from the outside world" which is based on a process of "inner regulation that replaces the reactions and actions due to fear of the social environment."

A slightly different meaning is given to the concept of independence by Luborsky (1962) who focused on the more emotional aspect of it. He pointed to the ability to function autonomously versus the need to be protected and supported.

Definition: The degree to which one is self-directed and self-controlled in one's thinking and actions and free of emotional dependence upon others. This is observed in the degree of self-reliance used in the decision-making process and in the outcome of the process in terms of independent actions; in the course of this process, the individual makes essentially self-determined choices in accepting and/or rejecting the environmental factors at hand.

2.3.3.5 Flexibility: A great deal of work has been done relating flexibility to psychological well-being (Barron, 1963; Hartmann, 1939 & 1947; Kubie, 1954; McKenzie, 1968; Scott, 1958; Zinberg, 1970).

In general, flexibility is seen as an ability to adapt and adjust to changing, changed and different situations and conditions; and this appears to be an on-going and continuous process (Conrad, 1952). Hinsie and Campbell (1967) define it as simply a process of adapting oneself (one's self) to the environment, whilst Drever (1961) described it as a process of becoming more "effectively" adjusted to the conditions involved. Similarly, Scott (1958) referred to "successful"adaptation and

coping in "the normal stressful situations of life." Smith (1950 & 1959) also described it as the "resilience" of the individual under "pressure". Luborsky and Bachrach (1974) expanded upon this description by viewing this aspect of psychological health as the ability to be resilient in the face of "stress". The idea of a capacity for maintaining a state of "dynamic equilibrium" (or balance) and the ability to successfully return (or "bounce back") to "homeostasis" in the face of change is continued by a number of mental health professionals (e.g., Blau, 1954; Ewalt, 1958; Hartmann, 1939 & 1947; Klein, 1960; Smith, 1950 & 1959). Finally, Kubie (1954) states that "flexibility is in contrast to the freezing of behaviour into patterns of inalterability." He suggests, for example, that behaviour can be assessed "as neurotic if the processes that have set it in motion predetermine its automatic repetition irrespective of the situation, the utility or the consequences of the act."

Specifically what is altered in the person to meet the changing and different conditions and situations are ways of thinking, feeling and behaving; this includes "habits, sentiments, attitudes or similar behaviour patterns" (English & English, 1966).

Definition: The degree of one's ability to adjust one's thinking, feeling and behaviour to changing situations and conditions and to be open and tolerant to differences and ambiguities in one's environment.

2.3.3.6 Problem-solving: Wishner (1955) suggested that psychological health can be conceptualized in terms of the degree of efficiency in meeting environmental requirements. According to him, inefficiency may be seen at the perceptual, cognitive, feeling or action level. Efficiency is equated with the appropriateness and adequacy of one's behaviour in the

problem-solving process; efficiency is a function of the ratio of focused to diffuse activity and of productivity. Wishner defines focused activity as activity directly relevant to the task requirements and diffuse activity as that which is irrelevant. He suggests that individuals with emotional problems and disturbances are characterized by a preponderance of diffuse activity while "normal and mentally healthy people are more efficient in meeting environmental demands and solving problems." Moreover, Silverman (1970) contends that "mental illness" is equated with the "inability to learn and solve problems, which cannot be explained by intellectual, sensory or health factors."

When discussing the relation of problem-solving to psychological well-being, Jahoda (1953 & 1958, pp. 62-64) emphasizes the "process" rather than its end-product. In exploring this process, the works of Jahoda (1953 & 1958) and those of D'Zurilla and Goldfried (1971) are presented. Other approaches to problem-solving reviewed in the literature appeared to be either minor variations of Jahoda's and D'Zurilla and Goldfried's or more simplified and less refined.

According to Jahoda, problem-solving presupposes a conscious awareness of a problem and an initial intention to deal with it. D'Zurilla and Goldfried refer to this initial stage as a "general orientation" which is followed by the next stage in which the problem is defined and formulated. This is then followed by considering various ways of solving the problem (Jahoda) which involves generating alternatives or strategies and planning tactics for implementing them (D'Zurilla and Goldfried). The individual must then decide on one or the other of the considered means (i.e., the best strategy and tactics) and finally implement that decision. D'Zurilla and Goldfried suggest

that this process is followed by a general assessment of the action taken. They contend that these stages are cumulative and that the successful completion of each stage depends on skills and information learned in the previous stages; if difficulty is encountered at a particular stage, it is then necessary to return to previous stages before proceeding. However, Jahoda suggests that the sequence "is usually not neat or orderly as far as these stages are noted." She also contends that "some discontent must be maintained in the early stages" called the "feeling tone" which serves as an incentive for proceeding to the following stages.

Definition: The ability to go through all of the following stages: (a) being aware that a problem exists and intending to deal with it, (b) defining and formulating the problem clearly, (c) generating several solutions to the problem, (d) deciding on one or the other of the considered solutions, (e) implementing the selected solution through focused and relevant activity, and finally (f) evaluating the efficacy of the solution. If the method is considered successful, it is added to one's repertory in dealing with similar problems in similar situations; but if it is unsuccessful, a similar approach may be attempted again or alternative means may be used to solve the problem, if the issue is still conceived of as a problem to be dealt with.

2.3.3.7 Assertiveness: In comparison to other personality factors purported to be related to psychological well-being, assertiveness is one of the latest to be focused upon in the mental health literature. In spite of the fact that one of the earliest contributions was made in the late forties (i.e., Salter, 1949), most of the work in this area began to

surface in the early seventies.

The vast majority of the works presented in the literature tend to focus on the ability (1) to affirm one's personal rights, (2) to convey opinions and beliefs and (3) to express one's feelings in an appropriate manner.

Assertiveness is seen by many (e.g., Galassi & Galassi, 1977, p. 3) as standing up for one's legitimate rights and being able to protect oneself from being taken advantage of by others (Cotler & Guerra, 1976, p. 3). Alberti and Emmons (1974, p. 27) describe this aspect of assertiveness as behaviour which essentially enables one to act in his or her own best interests.

Another important aspect is the ability to directly express opinions (Galassi & Galassi, 1977, p. 3) and beliefs which can be both positive or negative (Cotler & Guerra, 1976, p. 3).

The third major aspect of assertiveness is the ability to directly express (Galassi & Galassi, 1977, p. 3) a wide range of feelings which can be of both a positive and negative nature as well (Cotler & Guerra, 1976, p. 3). Alberti and Emmons (1974, p. 27) add that the assertive individual is able to express these feelings comfortably.

Galassi and Galassi (1977, p. 3) view assertiveness as direct communication. This point was expanded upon by Fensterheim and Baer (1975, p. 20) who stress that assertive individuals feel free to reveal themselves and to communicate in an open, direct, honest and appropriate way. Furthermore, assertive behaviour is carried out without an excessive amount of anxiety, fear (Galassi & Galassi, 1977, p. 3) or guilt (Cotler & Guerra, 1976, p. 3).

Fensterheim and Baer (1975, pp. 53-54) stress that assertiveness

should not be confused with aggressiveness. This point has been echoed by many theorists in this area and was emphasized very early by Salter (1949). In fact, he referred to assertiveness as "excitation" in that he thought that it had less aggressive connotations. Salter pointed out that while excitation (i.e., assertiveness) is a two-way street, aggressiveness is a one-way street which disregards the rights, wishes and feelings of others. In aggressive behaviour (in contrast to actual assertiveness), the individual expresses opinions and feelings but does so in a demanding, manipulative, controlling, threatening, hostile, punishing and/or assaultive manner (Galassi & Galassi, 1977, p. 15). This disregards or infringes on the other person's rights; and there is little or no consideration of the feelings of the other person who is the object of the aggression.

Lange and Jakubowski's (1977, p.7) definition of assertiveness is one of the most comprehensive and simple that the writer has come across in his review of the literature. They view assertiveness as "standing up for personal rights and expressing thoughts, feelings and beliefs in direct, honest and appropriate ways which do not violate another person's right."

Definition: The ability to stand up for personal rights and express thoughts, beliefs and feelings in direct, honest and appropriate ways which do not violate another person's rights.

2.3.3.8 Reality testing: The way in which individuals perceive themselves and the world around them is thought to represent an important criterion for psychological well-being; and according to Fromm (1955) psychological health may be characterized by the "grasp of reality inside

and outside of ourselves." However, in spite of the importance of reality testing, much of the theoretical activity generated in this area has evolved primarily from studying psychopathology.

In relating reality testing to psychological well-being, Jahoda (1950, 1953 & 1958, pp. 49-52) focuses primarily on the way the individual perceives the environment. Perception of reality is called psychologically healthy when what the individual perceives, thinks, and feels corresponds to what is actually there. This is based on objectivity and "the concern for evidence to support what one sees and anticipates." Therefore, the psychologically healthy individual will test reality for the degree of correspondence to their perception, ideas and feelings. On the other hand, one who demonstrates below average psychological health often assumes such correspondence without testing. According to Jahoda (1958), psychologically healthy individuals seek objective evidence of their perceptions, thinking and feelings. Both Fromm (1955) and Smith (1950) also stressed objectivity and the adequacy of the individual's perception of reality, both of self and environment. Beck et al. (1979, p. 154) also conceptualizes reality testing as a way of "examining and authenticating" one's ideas and thoughts; it is a testing of cognitions against available reality-based evidence and an assessing of assumptions. Poor reality testing occurs when one's system of making references or drawing conclusions from one's observations is at fault (Beck, 1976, p. 219); this results in misinterpretations and erroneous conclusions (Beck, 1979, p. 154). If the perception of the self and environment is not objectively accurate but approximates it and permits efficient interaction between the person and his or her milieu, Jahoda (1958, pp. 49-52) considers it to be within the realm of psychological

health.

Jahoda (1958, pp. 49-52) believes that accurate perception is closely related to adaptation to reality, which she sees as the next logical step in reality testing. She stresses that psychologically healthy perception means a process of viewing the world so that one is able to take in matters one wishes were different without distorting them to fit those wishes--that is, without inventing cues not actually existing. Hence, after seeking objective evidence, one accepts it even if it goes against one's wishes. On the other end of the continuum, one sign of psychopathology is the avoidance of seeking evidence or the rejection of it even when presented and demonstrated.
Definition: This is when what the individual thinks he or she is experiencing corresponds to what is actually there. This correspondence is generally tested rather than assumed. Testing entails a process of seeking out objective evidence to support what one thinks one is experiencing; and that which is tested is then accepted, even if it goes against one's wishes. One is thus able to take in matters one wishes were different, without distorting them to fit these wishes.

2.3.3.9 Stress tolerance: Jahoda (1958, pp. 41-42) summarized the early work relating stress tolerance to psychological well-being prior to 1958. She concluded that the individual's response to stressful situations is an important way of examining the level of "personality integration" and, hence, the degree of one's psychological health (i.e., a means of checking how well the person is "put together"); she went on to suggest that the difference between people who are psychologically healthy and those who have problems is not the manifestation of the signs and

symptoms of psychopathology like anxiety per se but rather the degree to which these symptoms can seriously unbalance the level of personality integration. This approach is similar to that of Janis (1956) who stated that the psychologically healthy person can tolerate stress and anxiety without "disintegration" because he or she "can cope better with anxiety and the danger behind the anxiety." Allinsmith and Goethals (1956) were also of the opinion that an important criterion of psychological health is the ability to withstand adverse events without "inner damage"; and this ability to weather stress and anxiety was thought to be due to the strength of personality organization. Bower (1960, p. 8) described this ability in almost poetic fashion: "The healthy person is one who is able or will be able to take the slings and arrows of life without caving in, becoming immobilized or exploding." Or as Scott (1958) put it: "Mental health is the ability to resist mental illness under stress."

Kobasa's research relating various aspects of stress tolerance to physical and psychological health (1977, 1979 & 1982) is probably some of the finest work that was carried out in this area in the last few years. She concluded that the healthy person is one who copes well with stress for four basic reasons. First, these people are active rather than passive when facing stress (i.e., they try to do something about it), and they also seem to have a greater repertory of suitable responses to stress. Similarly, Offer (1973) and Offer and Sabshin (1974, p. 169) are of the opinion that healthier individuals have a larger variety of coping techniques available to them. Hamburg and Adams (1967) also focused on the "seeking and utilizing of information under stressful conditions" in successful coping. In light of the nature of the above description of this particular aspect of stress tolerance, some have viewed it as a type of

immediate problem-solving in relating to anxiety-provoking situations (Lazarus et al., 1974; Meichenbaum, 1977, p. 195).

Kobasa's second major finding (1977, 1979 & 1982) is that good copers know how to mobilize support and assistance from others in time of stress. She also found that they have an optimistic orientation toward resolving stressful life situations and anticipate change in general as an exciting challenge to further development.

An additional conclusion reached by Kobasa (1977, 1979 & 1982) is that those individuals who cope well under stress are people who feel that they can control or influence stressful events in one form or another. Seligman (1975) also focused on the feeling of being in control in stressful situations versus "helplessness" and "hopelessness".
Definition: The ability to withstand adverse events and stressful situations without becoming immobilized, caving-in or exploding. This is accomplished by: (a) being able to choose various courses of action from a large enough repertory of potentially suitable responses, (b) knowing where, to whom and how to turn for assistance and support, (c) having an optimistic orientation toward new experiences and changes in general and toward one's ability to successfully overcome the specific problem at hand, and (d) feeling one is in control, can control or influence the stressful event or situation in some manner.

2.3.3.10 Self-actualization: The mental health literature reveals three major aspects of self-actualization: (1) the realization of potentialities, (2) an involvement in and commitment to interests and goals, and (3) the overall enrichment of one's life.

With regard to the first aspect of self-actualization, it can be

defined as an on-going "process of developing one's capacities and talents" (English & English, 1966), which is based on a "permanent striving" to realize these potentialities (Jahoda, 1958, p. 30). With respect to this permanent striving, Maslow (1955, pp. 8-27) saw what he termed "growth motivation" leading beyond mere tension reduction (i.e., the satisfaction of safety, belongingness, love, respect and self-esteem needs) to the self-actualization of the individual's potential capacities. Mayman's (1955) view of the process of self-actualization was similar to that of Maslow's in that he too conceived of a "growth direction" towards goals higher than the mere satisfaction of basic needs.

With regard to the second aspect of self-actualization, Jahoda (1958, p. 30) sees self-actualizing individuals as people who lead a rich and differentiated life and who are involved in various pursuits not restricted to what must be done for sheer survival; these people demonstrate "a commitment to higher goals, concern with others and work, a concern with ideas and interests and motivation to realize them." Maslow (1955, pp. 8-27), saw self-actualization as characterized by a "devotion to a mission in life or a vocation, to activity rather than rest or resignation." Lastly, Lindner (1956, pp. 3, 205) considered self-actualization to be "a profound and complete participation in living."

A number of theorists focus on that aspect of self-actualization which leads to an enriched life style. More succinctly, this means leading a life which is varied and full and being involved in pursuits which are important and meaningful to the individual. Mayman (1955) viewed self-actualization as a "wistful yearning" for "a richer life, an inner push toward new experiences" which he summarized as "an investment

in living". Conrad (1952) wrote about "meaningful and productive living." Strupp and Hadley (1977) also focus on this "striving to find meaning in one's life" as a key element in self-actualization.

Scott's (1958) approach to this construct combines a number of the above mentioned aspects of self-actualization and summarizes its relation to psychological well-being. He defined "healthy personalities" as those who "continue to grow, develop and mature through life, accepting responsibilities, finding fulfilment, without paying too high a cost personally or socially."

Definition: The process of striving to actualize one's potential capacities, abilities and talents. It is generally characterized by being involved in various interests and pursuits and being committed to purposes and goals. It is the life-long effort to enrich one's life, without paying too high a cost personally and socially.

2.3.3.11 Happiness: A number of people in the field of mental health have emphasized the role and importance of happiness in psychological health. Alonso (1961, pp. 21-25) stresses that "happiness is a most valuable ingredient for personal well-being." Related to this, Phillips (1967) sees "mental health and mental illness on a continuum of happiness and unhappiness" which he suggests could be a possible measure of general psychological well-being. This was earlier put forth by Scott (1958) who suggested that psychological health be evaluated by assessing the individual's general feeling of happiness. This idea was also taken up and explored by Bradburn (1969).

Based on the various descriptions and definitions that appear in the literature, two basic aspects of happiness appear to be related to the

general feeling of satisfaction and contentment on the one hand and the ability to enjoy life and have fun on the other.

Scott (1958) described happiness as "feeling self-satisfied and content" in various areas of one's life. Alonso (1961, pp. 21-25) viewed it as "a quiet, friendly condition caused by a changeable balance between wills and gratifications in all vital spheres." According to him, happiness is not only a feeling of self-satisfaction but also a feeling of inner peace. Blau (1954) also conceived of it as "feeling relatively at peace with oneself and the world and having a sense of freedom, contentment, achievement, growth and satisfaction." If "mental health" can be viewed "as or characterized by being satisfied", then "mental illness" may be characterized by "being dissatisfied, pessimistic, depressive, clinging, beseeching and suffering" (Ostow & Cholst, 1974).

Another important aspect of happiness, and psychological health, is the ability to "enjoy the usual opportunities for enjoyment" (Ginsburg, 1955, pp. 7, 21) and to "have fun" (Ostow & Cholst, 1974). Alonso (1961, pp. 21-25) feels that "one needs to depart from one's main purpose." [It is interesting to note that the word "divertimento" in Italian (literally a diversion from) means recreation and enjoyment]. Similarly, Blau (1954) states that "the healthy individual is one who can relax after work and enjoy recreation." According to Conrad (1952), the emotionally healthy person is "always able to find enjoyment in something" and is "able to release oneself sufficiently to enjoy one's world;" to continue this line of thinking, "mental illness" is characterized by "being inhibited to the extent that one cannot enjoy play" and by "a general pervasive mood of unhappiness or depression."

Menninger (1947) tapped the essence of the relationship of

happiness to psychological well-being by conceptualizing psychological health as the adjustment of human beings to the world and to each other with a "maximum of effectiveness and happiness." However, it is "not just efficiency, or just contentment, or the grace of obeying the rules of the game cheerfully" but "all of these together." He concludes and summarizes the essence of psychological health as "the ability to maintain an even temper, an alert intelligence, socially considerate behaviour and a happy disposition."

Definition: The ability to feel satisfied with and enjoy various aspects of one's life, and to play and have fun.

2.4 THE A PRIORI FORMULATION OF PSYCHOLOGICAL WELL-BEING

The a priori formulation of psychological well-being presented here is based upon the eleven factors which emerged from the survey of the literature (subsection 2.3.1). Based on this formulation and the way in which these personality factors were operationally defined (subsection 2.3.3), it is expected that psychologically healthy individuals generally have positive self regard, are able to establish and maintain close and meaningful relations with others, are socially responsible, and are independent; they are flexible, good problem-solvers, assertive, posses good reality testing and can withstand the normal stresses of life for the most part; they strive toward self-actualization and are generally happy and are able to enjoy life.

This formulation is an hypothesis or expectation regarding the factorial structure and nature of psychological well-being. It is expected that psychologically healthier individuals will demonstrate

significantly higher degrees of these personality factors than those who are assessed to be less psychologically healthy. An additional hypothesis is that an inventory based on this proposed formulation will be able to distinguish between individuals who possess below average, average and above average psychological health.

The a priori formulation, together with the above-mentioned hypotheses, must then be empirically examined and subsequently accepted, rejected or modified in light of the results. The following chapters will deal with this issue in depth.

CHAPTER THREE

CONSTRUCTION OF THE EXPERIMENTAL INVENTORY

3.1 INTRODUCTION

This chapter presents the procedure that was employed in constructing the experimental inventory. The purpose of constructing this instrument was to develop a reliable and valid method of evaluating the eleven personality factors previously identified and to empirically examine the a priori concept of psychological well-being based on these factors. Eleven scales were developed to directly examine each of the factorial components of this concept and its overall structural nature; and two additional scales were constructed to detect two forms of test sabotaging.

This chapter describes the various phases that were involved in developing the experimental inventory which are as follows: (a) the creation of the item pool, (b) the initial selection and editing of the

items, (c) the inclusion of sabotage detection scales, (d) the enumeration of the original 240 items before piloting, (e) the construction and internal design of the 240-item inventory, and (f) the piloting of the inventory and the presentation and application of the results.

The employment of inventories in psychometrically studying and assessing personality and psychological well-being has its origins in the infancy of the mental health professions. Eight of the most popular and widely used such inventories (Buros, 1953, 1959, 1972 & 1978) are discussed below in order to exemplify the major developments which have been made in this field (Anastasi, 1982, pp. 497-526).

One of the first applications of the inventory method in studying and assessing psychological health was Woodworth's Personal Data Sheet which was developed during the First World War (Anastasi, 1982, pp. 17, 498-500). This is thought to be the prototype of the personality and psychological health inventory and has served as a model for many subsequent inventories. The Personal Data Sheet was designed as a rough screening device for identifying seriously disturbed men thought to be emotionally unfit for military service. It is composed of a number of questions dealing with common neurotic symptoms. A total score is obtained simply by counting the number of symptoms which are reported; this renders a general neurotic score. This does not, however, indicate the strength of the symptoms nor the degree of severity of neuroticism. Essentially this was an attempt to standardize a psychiatric interview for group administration. Items were selected based on their content validity through the employment of empirical criterion keying and the method of contrasted groups.

In 1940, Hathaway and McKinley developed the Minnesota Multiphasic Personality Inventory (Anastasi, 1982, pp. 500-507; Buros, 1953). The MMPI has not only been one of the most widely used inventories in clinical practice, but it has also been used extensively in research (i.e., there are over 5000 references which have appeared in the Psychological abstracts to date related to this inventory). Like the Personal Data Sheet, the MMPI selected items based on empirical keying; it included 550 affirmative statements answered on a simple trichotomous response set (True, False, Cannot Say). However, in contrast to the personal Data Sheet, it renders ten clinical scales (hypochondriasis, depression, hysteria, psychopathy, masculinity-feminity, paranoia, psychasthenia, schizophrenia, hypomania, social introversion). An additional advantage and special feature was the development of three scales designed to detect various forms of test sabotaging. Scores are reported in the form of standard scores with a mean of 50 and SD of 10 (T scores); a cutoff point for pathological deviation is set at 2 SDs above the mean. The MMPI was and is used in differential diagnosis as well as general personality assessment.

Gough's California Psychological Inventory (CPI) appeared in 1948. It is quite similar to the MMPI with respect to the way in which it was developed but possessed definite technical improvements. Half of its items were taken from the MMPI, and additional items were selected based on contrasted group responses and ratings (peer nominations). It includes 480 items which are responded to by True or False. It also includes three "validity" scales designed to assess faking bad, faking good and "popular responding". It yields 18 personality scales which are also reported in T scores (dominance, capacity for status, sociability, social presence,

self-acceptance, sense of well-being, responsibility, socialization, self-control, tolerance, good impression, communality, achievement via conformance, achievement via independence, intellectual efficiency, psychological-mindedness, flexibility, femininity). Like the MMPI, there is also a relatively high inter-correlation of scales. It was standardized on a much larger, randomly selected and representative sample than the MMPI (i.e., 6,000 males and 7,000 females). In addition to personality assessment, it was and is used to assess psychopathology as well.

The Guilford-Zimmerman Temperament Survey and Cattell's Sixteen Personality Factor Questionnaire (16PF) appeared in 1949. The development of both inventories was based on factor analysis, which was considered to be an innovation in test-construction.

In the construction of the Guilford-Zimmerman Temperament Survey, items from a number of existing inventories were factor analysed. This rendered ten personality scales (general activity, restraint, ascendance, sociability, emotional stability, objectivity, friendliness, thoughtfulness, personal relations, and masculinity). To these scales were added three scales designed to detect test-sabotaging. The items are in the form of affirmative statements to be answered on a simple trichotomous response set (Yes, No, ?). Scale scores are reported in the form of percentiles and standard scores. The development of the 16PF relied on a more advanced and meaningful application of factor analysis than did the Guilford-Zimmerman Teperament Survey. Cattell assembled all personality trait names occurring in the dictionary and in the psychological and psychiatric literature (171 terms after obvious synonyms were reduced); these were then factor analysed and resulted in 16 primary

factors. Items were then generated to fit these factors; this resulted in 16 scales (eight of which appear in Table 4.2 in subsection 4.3.1.3) There is only one "verification key" on some of the forms of the 16PF, which is designed to measure the examinee's motivational level at the time of testing. More information about the 16PF is found in subsection 4.3.1.3.

The Edwards Personal Preference Schedule (EPPS) appeared in 1953. The EPPS was developed to assess the strength of Murray's 15 manifest needs (i.e., one of the first self-report inventories based on personality theory). Items were selected for each of these needs based on content validity; this created 15 scales (achievement, deference, order, exhibition, autonomy, affiliation, intraception, succorance, dominance, abasement, nurturance, change, endurance, heterosexualtiy, aggression). The EPPS includes 210 pairs of statements and employs a forced-choice response technique (i.e., requires the respondent to choose between two descriptive terms of phrases that appear equally acceptable). Results appear as 15 need scores in the form of percentiles and T scores. There are two additional indices which measure (1) "respondent consistency" and (2) "profile stability". A special feature of the EPPS is that it employs ipsative scores which means that the strength of each need is expressed in relation to the strength of the individual's other needs and that the frame of reference is the individual rather than the normative sample. Although this represents an interesting and important advance in test-construction, it makes it very difficult to conduct validity studies and evaluate their results (Anastasi, 1982, p. 517)

The latest noteworthy developments in the self-report inventories have been Jackson's Personality Research Form (PRF) in 1965 and Millon's

Clinical Multiaxial Inventory (MCMI) in 1977 (Buros, 1972 & 1978).

The MCMI was developed essentially to meet the technical criticism levelled against the MMPI (Anastasi, 1982, pp. 510-511); it represents an improved, smaller and more powerful version of the MMPI. Both the MCMI and the PRF share in common a "multiple approach" in test-construction (Anastasi, 1982, p. 511). This approach progresses from (1) generating items to fit specific constructs, to (2) item selection based on item-analysis and finally to (3) external validation of the scales involved. The application of this method in the development of the MCMI created 20 clinical scales (asocial, avoidant, submissive-dependent, gregarious-histrionic, narcissistic, aggressive-antisocial, conforming-compulsive, negativistic-unstable, schizoid-schizophrenia, cycloid-cyclophrenic, paranoid-paraphrenic, anxiety, hysterical, hypomanic, neurotic depression, alcoholic misuse, drug misuse, psychotic thinking, psychotic depression, psychotic delusions); this inventory also included "correction scores" (to detect faking, random responding, and other test-taking bias). There are 175 brief, self-descriptive statements answered as True or False. Based on the way in which it was constructed and the types of clinical scales which were developed, the MCMI is more capable than the MMPI of making diagnoses within a DSMIII or ICD9 frame of reference.

The PRF reflects many of the technical advances made in test construction in the last seventy years (Anastasi, 1982, pp. 518-520). Like the EPPS, the PRF was theoretically based on Murray's manifest need system but also upon other conceptual frames of reference and research findings in the literature. With respect to the development of the PRF in particular and personality inventory construction in general, Jackson

(1970 & 1974) stressed that "the current trend is to utilize multiple approaches, treating them as different steps in a sequential test-construction strategy." Thus, Jackson began the construction of the PRF by developing explicit, detailed descriptions of the constructs he wanted to measure. He formulated behaviourally oriented and mutually exclusive definitions of 20 personality constructs (12 are the same as the EPPS and eight more were added--i.e., harmavoidance, impulsivity, play, social recognition, understanding, cognitive structure, defendence, and sentience). One hundred items were generated for each scale based on the definitions. Twenty items were then selected for each scale based on item-analysis (i.e., those which demonstrated the highest item-scale correlations and the lowest correlation with a measure of social desirability). Two "validity" scales were added to the inventory (the Infrequency Scale which indicates inconsistency in responding and the Desirability Scale which examines the degree of social desirability response bias or the tendency to fake good). The standardization of the PRF was based on a higher level of sampling and a larger sample). The validation of the PRF is based on other-observer ratings, pooled peer ratings and self-ratings.

A number of inventories have been based on personality theories (e.g., the EPPS, the PRF, the POI, etc.). However, specific mention in the literature of employing an inventory specifically constructed to develop a theory of psychological well-being is nearly non-existent. One of the very rare examples of this was Coan's (1974) construction of a number of separate inventories designed to examine the relationship between various personality factors and psychological well-being which was discussed in subsection 2.2.2.6.

Frequent reference will be made to Jackson's Personality Research Form (PRF) when describing the construction of the experimental inventory and discussing the results obtained from its implementation; the PRF is used as a primary reference because it is considered to be one of the most sophisticated personality inventories that has been constructed to date (Anastasi, 1982, p. 518). The PRF exemplifies and represents the latest generation of self-report inventories in that it has employed the latest and most advanced methods in test construction.

The rationale and justification for employing psychometric methods and statistical analysis in theory-testing: The use and interpretation of quantified results obtained from psychometric measurement in the development and examination of psychological theory (i.e., meaningfully relating mathematics, statistics and numbers to abstract theory) is justified if one axiomatically accepts the need to objectively and systematically verify supposition and conjecture.

The development of a method designed to examine a proposed theory (as operationally defined) is the stage of the empirically-oriented theory-testing process which often has recourse to psychometrics. This dictates the selection or construction of an instrument or instruments which are essentially empirical indicants of the theory (i.e., quantifiable and measurable approximations of it, empirical models designed to tap or capture the essence of the theory rendering it examinable in order to test it more simply and objectively). Because theoretical abstractions are limited in not being directly observable or measurable, the systematic testing and evaluation of theories necessitates these empirical indicants (Greer, 1969, p. 160; Zeller & Carmines, 1980,

p. 158). In order to describe and help understand results received from the employment of these psychometric instruments, mathematical models and statistical procedures are frequently applied. After the results are described, analysed and interpreted in this manner, the last step is to make inferences back to the original theory. Thus, a crucial aspect of the entire empirically-oriented theory-testing process is dependent upon the validity and reliability of the empirical indicants of the theory (i.e., the psychometric instrument); this is essentially asking how successful is the instrument in representing and measuring the theory. This aspect directly influences the ability to collect data and render meaningful and interpretable results; it, in turn, influences the accuracy of the inferences that can be made with respect to accepting, rejecting or modifying the theory. Therefore, the employment of this approach is justified to the extent to which the psychometric instrument is a valid and reliable representation of the theory.

This empirically-oriented process of theory-testing will be used in the present research, which will thus necessitate a thorough examination of the validity and reliability of the instrument involved; hence, the justification for eventually making inferences back to the proposed theory (of psychological well-being) based on the interpretation of quantified results (i.e., numbers) will depend upon the validity of the psychometric instrument employed to test the theory. Therefore, the writer's ability to later interpret the results of the present research will rest primarily on the validity and reliability of the experimental instrument which is employed.

In spite of the difficulty encountered in quantifying human experience, psychometric measurement and statistical analysis has

frequently been used to facilitate the systematic study of human beings as well as the testing of theories designed to describe, explain and predict their behaviour. The justification for using this approach is stressed by Vaillant (1977, p. 50): "Although statistics, numbers, controls, and blind ratings are tedious, they are necessary in order to combat the distorting effects of preconceptions." Some of the more well known examples of employing psychometrics and statistics in the testing and development of psychological theories are those of Binet and Wechsler in the field of human intelligence, Cattell and Guilford in personality theory, and, most recently, Coan in the conceptualization of psychological health.

3.2 CREATING THE ITEM POOL

One of the first tasks in constructing the experimental inventory was to create a large item pool, from which items would be selected. Items were drawn from three major sources: (a) mental health professionals, (b) existing inventories and questionnaires, and (c) the writer's clinical experience and survey of the mental health literature. This represents an expansion upon Jackson's approach (1974, p. 15) which relied primarily on the mental health literature as the major source of items in the construction of the Personality Research Form.

3.2.1 The first source: Mental health professionals

Three clinical psychologists and two psychiatrists created a number of items based on the definitions which were developed (subsection 2.3.3). They were four English-speaking South Africans and one British citizen who had resided for approximately 14 years in Southern Africa.

These mental health professionals were in their late thirties and early forties and had at least ten years of clinical experience; all of the psychologists held doctorates. This method of "consultation with the experts" in generating and selecting inventory items is suggested by Anastasi (1982, pp. 131-132).

They were given a booklet containing a cover letter and the eleven definitions that appear in subsection 2.3.3. The cover letter stated that these personality factors were thought to be related to psychological health and that they were asked to create a number of items for each factor based on each of the definitions.

They were requested to generate a number of questions that they might ask in attempting to determine the extent to which an hypothetical interviewee possessed each of the personality factors based on the definitions given them. These questions were to be phrased in such a manner as if they were interviewing "an average 18 to 21 year-old white English-speaking South African" (Appendix A).

There was a great deal of overlap between the items received. This suggests that the definitions were clear and comprehensible in that they generated similar types of items from five different people; this also confirms the approximate range of items to be expected which is one method of ensuring the content validity of the scales and the experimental inventory as a whole.

Self regard, interpersonal relationship, social responsibility and stress tolerance generated a large number of items; independence, self-actualization and happiness generated fewer; and reality testing, flexibility, problem-solving and assertiveness generated the least amount of items.

3.2.2 The second source: Existing inventories and questionnaires

Additional items were drawn into the item pool after reviewing a number of existing inventories and questionnaires.

By reviewing various personality inventories, one benefits from the experience of those who constructed these tests since, in most cases, this has involved quite a thorough endeavour in item selection.

The complete list of the self-report inventories which were reviewed is found in Appendix B. These inventories were systematically examined item by item. Those items that appeared to be related to the eleven personality areas in general or related to specific conceptual components of the definitions were added to the item pool. Items were considered irrespective of the fact that they were phrased as statements or questions, or stated in the positive or negative or if they were open-ended or closed--almost all of the items were altered to some degree.

Items were not extracted from the Sixteen Personality Factor Questionnaire (16PF), the Personal Orientation Inventory (POI) and the Ninety Symptom Checklist (SCL-90) because these inventories were used in the experimental design of the research--items generated and selected in this manner would have artificially increased the correlation between these scales and those on the experimental inventory which was to be examined later on.

Out of those inventories that were examined, the following contributed the most to the item pool: Berneuter Personality Inventory, Eysenck Personality Inventory, George Washington Social Intelligence Test, Howarth Personality Questionnaire, Personal Data Sheet, Polyfactorial Study of Personality, South African Personality Questionnaire, and MMPI.

The greatest amount of items that were extracted from these

inventories were in the areas of flexibility, problem-solving, assertiveness, stress tolerance and happiness.

3.2.3 The third source: The writer's clinical experience and survey of the mental health literature

The third source of item generation was based on the writer's clinical experience and survey of the mental health literature. This approach was also used in the final selection and editing of the items.

Those references in the mental health literature which contributed to the definitions (subsection 2.3.3) were re-examined. Although this very seldom rendered actual items per se, it was possible to create numerous items based on the information contained in the reference sources. This is one of the most prevalent and popular methods employed in item generation (Zeller & Carmines, 1980, pp. 78-79).

The greatest number of items were generated in this manner.

3.3 ITEM SELECTION AND EDITING

The above sources generated approximately 1000 items in all.

The next stage involved selecting the most appropriate items for each of the personality factors. In that an item pool may be viewed as a sample of content, these items were then evaluated in terms of how adequately they represented and reflected the content domain implied by the definitions (Jackson, 1971).

Item selection was carried out in two basic steps. The initial step involved a narrowing down and selection of items in each of the eleven areas based on conceptual, logical and language considerations prior to piloting the experimental inventory. The second step involved

the application of statistical procedures (i.e., item analysis) subsequent to piloting the inventory in order to eliminate the weaker items. The first step will be dealt with in the present section.

3.3.1 The initial editorial review of the item pool

The overall item pool was broken down into approximately 80 to 100 items per personality factor. The initial task was to reduce this number to 15 and 20 items per area prior to piloting the original form of the experimental inventory. A number of guidelines and considerations were employed from the outset in order to carry this out. This general process has been summarized by Jackson (1971) when he described the construction of the Personality Research Form: "The items from the item pool are subjected to a thorough editorial review, so that a good many items which were initially written for a scale are not even included in the item analysis for failing to pass the first substantive hurdle."

The general approach employed in narrowing down these items was to select those most closely related to the conceptual components of the definitions. This represented yet another way of increasing the content validity of each personality scale in addition to the previous approach described in section 3.2. Content validity is a rough estimate of the extent to which the sample of items in a test is representative of the domain they are to tap (Magnusson, 1967, p. 129). It dictates that all major aspects should be covered by appropriate items in the correct proportions (Anastasi, 1982, pp. 131-132). An adequate job of sampling is usually enough to ensure that an inventory or scale has content validity (Downie & Heath, 1970, p. 249) which rests primarily on appeals to reason and logic (Nunnally, 1967, p. 82).

Each definition was first broken down into basic conceptual components. For example, self regard (subsection 2.3.3.1) was broken down into (a) viewing oneself as basically good, (b) respecting and liking oneself, (c) accepting oneself and (d) feeling confident with oneself. Items were then selected based on these specific conceptual components of the definition; this method is recommended by Zeller and Carmines (1980, pp. 78-79). "General" items were often included because of their comprehensive nature in representing the entire personality factor and/or their ability to combine more than one conceptual component of the specific definition. For example, the item "On the whole I am my own person" was thought to include most of the conceptual components of the definition of independence (subsection 2.3.3.4). Some conceptual components in certain definitions received disproportionately less items in comparison with other components because it was thought that they were less important or simply because there were initially too few items in those components. Anastasi (1982, pp. 131-132) discusses not only the need to select items in proportion to their importance but also points out that "a test can easily become overloaded with those aspects of the field that lend themselves more readily" to item generation. This was kept in mind in reviewing the items selected for each factor, and additional items were subsequently generated when needed.

After items were allotted to the conceptual components of each definition, the most concise and clearest were selected (Jackson, 1970, p. 68, & 1971). For example, the item "In the future I may or may not relate to God and religion as I do today but am nearly certain that things will continue as they always have been in such matters" was rejected and substituted with a more concise and clearer version like "My ideas about

God and religion are unchangeable." For the same reasons, it was also decided to discard items like "To a great extent I am generally able to understand and incorporate various sorts of stressful events into my ongoing life plan".

The next task was to retain the most successfully phrased items amongst those with similar content. For example, the item "People like to be with me" was thought to be better phrased than other redundant versions like "I have the feeling that most of the time many people enjoy my presence for the most part."

An effort was made to shorten lengthy items (Jackson, 1970, p. 68), to simplify sentence structure and syntax, and to make them as understandable as possible. For example, "I believe that if you've decided to do something then go ahead and do it" was a shortened and radically simplified version of its original form (i.e., "In light of the fact that I generally know what to do in most situations, I usually find it quite easy to make decisions and follow through with a specific course of action.").

For each personality factor, an attempt was made to achieve a mixture of items that were phrased in a more abstract manner with those which were more specific and descriptive in cognitive, emotional and behavioural terms. The former were designed to give the respondent latitude of response and, hence, were purposely more broad while the latter tried to tap more specific information with respect to how a person would think, feel and/or behave in certain situations. For example, a more specific form of "I'm seen as a person who plays a responsible role in most activities" which was also selected was "If I saw an accident I would try to take an active part in getting the situation under control

and giving aid."

Balancing items phrased in a positive manner (i.e., for positive keying) with those stated in a negative fashion (i.e., for negative keying) is helpful in identifying test sabotaging in the form of inconsistent response patterns and in reducing acquiescence in responding (Jackson, 1974, p. 15). Zeller and Carmines (1980, p. 143) stress the importance of positive-negative balancing: "In order to decrease potential method artifact such as response set (e.g., yea sayers and nay sayers), good methodological procedure specifies that one should word half the questions positively and half of them negatively." Therefore, in each scale, this type of balancing was carried out. This was not done in a rigid manner to create identical opposites (e.g., "I am flexible" and "I am not flexible"), but rather approximate opposites were developed (e.g., "I am basically an unhappy person" and "For the most part I enjoy life"). Exact positive-negative balancing was avoided in that this would merely create two forms of the same item which would essentially reduce the overall number of items and run the risk of artificially increasing the internal consistency.

The item selection process rendered 210 items. Twenty items were selected for nine of the factors, and 15 items were selected for two (i.e., interpersonal relationship and social responsibility).

3.3.2 Proof-reading

The 210 items which were selected were proof read by eight white English-speaking South Africans. They were a professor of English, a tutor in the Academic Support Programme at Rhodes University (a remedial language instruction programme for students whose first language was not

English), two students doing a master's degree in psychology, an undergraduate student who had completed one year of course work in the field of commerce, a high school scholar who completed Standard 10 (12th grade) and two high school scholars in Standard 10 at an English-speaking high school.

They individually received a brief verbal account of the nature of the study and a detailed explanation of what specifically would be required of them. They then received a list of the 210 items which had been semi-randomly scattered in such a way that items from the same personality area would not appear together. Attached to the list of items was a cover letter which included a brief description of the present study and the instructions for proof-reading (Appendix C).

The proof-readers were instructed to examine each of the items for clarity of statement, syntax, grammar, spelling and idiomatic expression that would be understood by "the average white English-speaking 18 to 21 year-old South African."

The next task was to examine the various alterations which were suggested and then decide on what exactly was to be integrated in the final editing of the items. About one third of the feedback was related to idiomatic expression, one third had to do with grammar and syntax, and a third was related to suggestions for "cosmetic changes" (e.g., the addition or reduction of words, fully writing out apostrophised words for special emphasis, and so forth). At times, a decision was made to adopt a structure which was grammatically incorrect in order to make it colloquially acceptable. For example, predicate nominatives were not always adhered to (e.g., "I think that others are more intelligent than me" rather than the grammatically correct "I think that others are more

intelligent than I").

One of the key contributions of proof-reading was to improve the face validity of the items and, hence, the experimental inventory as a whole. Although face validity is not validity in the statistical sense, it is a way of estimating the appropriateness of the language used in a particular setting and for a specific population; if the content and/or style of items appears incomprehensible, irrelevant, inappropriate or silly, the result may be poor cooperation on the part of the respondents (Anastasi, 1982, p. 136).

3.4 INCLUSION OF TWO SABOTAGE DETECTION SCALES

Test sabotaging includes such behaviour as non-purposeful or random responding, difficulty or inability in comprehending the items, unwillingness to respond or lack of cooperation, low motivation, carelessness, faking good and faking bad (Jackson, 1974, p. 11). Various methods of reducing and detecting test sabotaging were built into the experimental instrument. One method of detecting sabotaging that was employed involved the construction of two scales specifically designed to detect faking good and faking bad. In addition to these scales, other methods were employed to reduce the possibility of test sabotaging such as selection of items for the personality scales which were phrased as simply as possible and perceived as not blatantly socially desirable, instructions designed to establish rapport and increase frankness in responding, stating why the research was being conducted, and assuring confidentiality (Anastasi, 1982, p. 522).

This section will discuss the rationale for including the faking good and faking bad scales and present the process of their development.

3.4.1 Rationale

The primary reason for developing these two scales was to assist in identifying respondents who attempt to either fake good or fake bad. Faking good is when the individual responds in such a way to create a favourable impression (Anastasi, 1982, p. 520), an attempt to "put up a good front" (Edwards, 1966). On the other hand, faking bad is an attempt to make oneself appear more psychologically disturbed than one actually is (Anastasi, 1982, p. 520). Therefore, the faking good scale was designed to detect dissimulation or feigning optimal psychological well-being whilst the faking bad scale was designed to detect simulation or malingering.

Not only is an elevated score on the faking good scale indicative of an attempt to fake good, but such a score is also influenced by the respondent's perception of "what is expected" of him or her and by "a desire to please the researcher" (Silverman & Shulman, 1970). Furthermore, a high faking good score may also point to "lack of self-insight, self-deception or an unwillingness to face up to one's limitations" (Edwards, 1966; Jackson, 1974, p. 12); and, at times, such a score is related to "a need for avoidance of criticism, social conformity and approval, and/or self-protection" (Crowne & Marlow, 1964; Frederiksen, 1965). In general, faking good is more apt to occur when one is applying for a job, seeking admission to an educational institution, making an effort to terminate psychiatric hospitalization or psychotherapy.

Jackson (1974, p. 12) cautions that an elevated faking bad score may indicate atypically low self esteem instead of an attempt to malinger. It may also indicate a need for attention, sympathy or help in meeting personal problems (Crowne & Marlow, 1964; Frederiksen, 1965),

which may explain why it is often observed in those who are seeking psychotherapy. Faking bad is often demonstrated by people on trial and those who are trying to dodge military service (Anastasi, 1982, p. 520).

It is reasonable to assume that one who scores significantly high on the faking bad scale will most likely be malingering because it is pathodynamically improbable that one could possess a high degree of such a wide variety of signs and symptoms of psychopathology as depicted in the items which were selected; and if this was the case, it would be highly unlikely that one would be able to complete the inventory in such a state. Furthermore, there is less of a reason for faking bad in the present research project simply because there is nothing much to be gained doing so. On the other hand, it will be more difficult to identify a participant who is faking good because it is more socially desirable to appear healthier than one is rather than psychologically disturbed; this is partly because of a tendency of many people to deny emotional problems and the fear of exposing psychological instability which could endanger one's future. Nonetheless, a very high score on the faking good scale would most likely indicate dissimulation of psychological well-being in that true "angelic" qualities of such an intensity are quite rare.

It was decided to invalidate a respondent's inventory when the scores on these scales exceeded at least two standard deviations above or below the mean scale score values; this is similar to the MMPI in which malingering is indicated when the F Scale exceeds a T score of 80, or three standard deviations, and the K Scale a T score of 70, or two standard deviations (Duckworth, 1979, pp. 43, 45).

3.4.2 Item generation, selection and proof-reading

Items for the two sabotage detection scales were drawn from three main sources: (a) the K and F scales of the MMPI, (b) a brain-storming session with two graduate students in psychology on various ways of feigning above and below average psychological health on self-report inventories, and (c) a number of discussions between the writer and his doctoral supervisor on the general topic of social desirability. These sources generated a total of 45 faking good items and 83 faking bad items.

The next task was to select 15 items per scale by adopting essentially the same procedure that was described in subsection 3.3.1. There were a number of basic differences between selecting items for the sabotage detection scales and those for the 11 personality factors. First of all, these two scales did not represent personality factors proposed to be related to a concept of psychological well-being but were artificially constructed to detect test sabotaging. Secondly, there was no attempt to balance items phrased in the negative with those in the positive; rather, all of these items were phrased for negative keying. Moreover, instead of selecting items designed to reduce the possibility of sabotaging (e.g., discarding socially desirable items) as was previously the case, these specific items were selected primarily to draw responses that might indicate attempts of sabotaging. Therefore, the items that were selected for the faking bad scale were related to a wide variety of signs and symptoms "dramatically" associated with psychopathology which did not cohere in any specific pathodynamic pattern; responding positively to such items would suggest a high degree of bizarre functioning; and it is unlikely that any one person would actually manifest all or most of these symptoms in any great magnitude. On the other hand, the faking good items

which were selected were items that were thought to represent mildly undesirable aspects of human behaviour which are common to most people at least to some degree; hence, a high degree of negative responses would indicate an exaggerated level of optimal psychological well-being.

This procedure resulted in the selection of 15 faking good items and 15 faking bad items.

A list of these 30 items (Appendix D) was presented to five proof-readers (i.e., three university lecturers, a master's student in psychology, and a secretary). They were given the same instructions for proof-reading which were described in subsection 3.3.2.

3.5 ENUMERATION OF THE ORIGINAL 240 ITEMS BEFORE PILOTING

This section will enumerate the 240 items which were selected (sections 3.3 and 3.4); they will be presented scale by scale broken down by the various conceptual components of the definitions (subsection 2.3.3). The number of the items as they appeared in the experimental inventory will appear to the left of each item, which is immediately followed by a "+" sign indicating an item that is positively keyed or by a "-" sign indicating an item that is negatively keyed. The derivation of the item appears in parenthesis following each item. If it was derived from the literature, the name of the author and date of publication is cited; if it was derived from another inventory, the name of that inventory appears in parenthesis. If the item was contributed by one of the mental health professionals, the abbreviation MHP appears in parenthesis; and those items where no source is cited, were generated by the writer.

3.5.1 Self regard

(a) The ability to view oneself as basically good:

199+ I think that I'm basically a good person (Jahoda, 1958).
49- I feel uncomfortable with people who look more attractive or are wealthier or more educated than I am (Johnson, 1981).
188+ People like to be with me (James & Jongeward, 1977).

(b) The ability to respect oneself:

14- Deep down I dislike myself.
162+ I have the feeling that people respect me.
210+ I'm happy with the type of person I am.
47- I feel that people don't like me (James & Jongeward, 1977).

(c) The ability to accept oneself:

3+ It's easy and natural for me to accept myself.
221- It's hard for me to accept myself just the way I am (Wright, 1971).
58- It's hard to accept myself when I'm sad.
136- It's hard to accept the sexual feelings that surge up within me from time to time.
175+ I can accept the fact that I'm capable of experiencing many different feelings (Johnson, 1981).
25+ Looking at both my good points and bad points, I feel good about myself (Jahoda, 1958).
84+ I'm happy with my physical appearance, with the way I look.
97+ I feel comfortable with my body.
110- I think that it's better to hide your fear than to show others you're scared.
123- I'm unashamed of my feelings of anger.

(d) The ability to feel confident with oneself:

71+ I feel sure of myself in most situations (Beiser, 1971).
232+ I feel confident when relating to others.
36- I need to be told how well I have done or am doing.

3.5.2 Interpersonal relationship

(a) The ability to accept and respect fellow human beings:

37+ I accept others the way they are without trying to change them (Johnson, 1981).
26- It is difficult for me to accept others the way they really are.
4+ I have met people whom I can really respect.
48- Basically I mistrust other people (MHP).
176+ I think that there are many people who are honest and can be trusted.

(b) The ability to establish and maintain relationships:

163+ On moving to a new place I make friends easily (South African Personality Questionnaire).
72- I fail to make friendships easily (Howarth Personality Questionnaire).
124+ I've made friendships which have been close for more than two years.
111- My close relationships with others last for short periods of time (McAllister, 1968).

(c) Mutually satisfying interpersonal relationships:

59+ I feel that my social relationships are rewarding for both me and my friends alike (Phillips, 1967).
85- My relationships with others tend to be superficial.
15- I don't enjoy being with others.

(d) The ability to give and receive affection and intimacy:

98+ I'm able to give and receive warmth and affection (Luborsky, 1962).
137- I'm unable to tell close friends intimate things about myself (Johnson, 1981).
150+ My friends can tell me intimate things about themselves (Johnson, 1981).

3.5.3 Social responsibility

(a) The ability to demonstrate social responsibility:

65+ I'm seen as a person who plays a responsible role in most activities (South African Personality Questionnaire).
226- I've been told that I don't have a strong sense of responsibility (Polyfactorial Study of Personality).
215- If I could get away with breaking or bending the law in certain situations I would.
91+ I would stop and try to help a crying child find his or her parents even though it was important for me to be somewhere else at the time.
193+ If I saw an accident I would try to take an active part in getting the situation under control and giving aid (Berneuter Personality Inventory).
237+ If I saw an elderly person with car trouble I would stop and try to help.
130- I think that people who don't have children shouldn't pay taxes for education.
204- It's hard for me to identify with people who risk their own lives to save someone else's.

(b) To experience oneself as a cooperative, contributing and constructive member in one's social group:

104- People tell me that I tend to be uncooperative in my relations with others.
143+ I feel that you should think more about what you can do for the community than about what the community can do for you.
156+ It gives me a good feeling to do something nice for others from time to time.
169- I dislike doing errands and helping around the house (Personal Data Sheet).
117+ I would enjoy participating in a religious, sports or social group (Phillips, 1967).
182- I have the feeling that I don't owe anyone anything in this world.
78+ I make a conscious effort to work for good relations with and between others (Saul & Pulver, 1965).

3.5.4 Independence

(a) General independence:

76+ On the whole I am my own person (MHP).
89- It's difficult for me to stand on my own two feet.

(b) Self-directed and self-controlled in one's thinking:

8- I'm lazy when it comes to thinking things out on my own.
30+ When it comes to making decisions I prefer to rely on my own thinking rather than on advice from others.
102- I would prefer others to make the important decisions for me in my life (MHP).
202+ I like to plan things on my own.
213- If I were involved in a project with two other people, I would rely more on their ideas than they on mine.
19+ It's easier for me to give advice to others than to accept their advice to me.

(c) Self-directed and self-controlled in one's actions:

63+ On the whole my actions and behaviour are determined by me (Jahoda, 1958).
115- In doing things I tend to rely more on help from others than on myself.
191- I prefer a job in which I am told pretty much what to do.
235+ I like to do things on my own, without outside help.
128+ I think that I can function better if left to do something on my own.
167- I'm more of a follower than a leader.

(d) Free of emotional dependence upon others:

180- I have a strong need to be with other people in order to get emotional support.
52+ I avoid clinging to others.
224- I seem to need others more than they need me.
154- It was (or is) difficult for me to leave home.
41+ I believe that most people could leave home earlier than they do.
141- I disapprove of people in their late teens living away from home (MHP).

3.5.5 Flexibility

(a) The ability to adjust one's thinking and feeling to changing situations and conditions:

21- It's difficult for me to change my ideas when new experiences or fresh evidence suggest that I'm wrong (Johnson, 1981).
10+ If I was convinced that my approach was wrong, I would be able to change my mind in the middle of an argument.
184- I think that there's only one real way of looking at most things in life.
106+ I believe that one's political thinking should change with the times and circumstances.
145- My ideas about God and religion are unchangeable.
54+ If I formed a dislike of someone in the beginning, I am able to change my feelings toward that person later on.
93- I disapprove of the way people are experimenting with sex these days (MHP).

(b) The ability to adjust one's behaviour to changing situations and conditions:

217- It's hard for me to stop what I've been doing for a long time and begin something new and different (Conrad, 1952).
239+ I like trying new and different things (South African Personality Questionnaire).
32- I find it difficult to make changes in my daily routine.
195+ If posted to a foreign country for a couple of years, I would adopt the customs of that country (South African Personality Questionnaire).
80- I think that it would be difficult for me to make the necessary adjustments if I were forced to leave my home.
228+ When going on a trip I'm able to lengthen or shorten my visit to particular places according to my interest when I get there (South African Personality Questionnaire).
43+ I'm able to forgive.
67- I find it difficult to see when I'm wrong and correct the situation.

(c) The ability to be open and tolerant to differences and ambiguities:

206+ I can understand and accept the fact that someone else's thinking and beliefs are different from mine.
132- I feel that foreigners shouldn't be trusted.
119+ I am able to befriend someone from another ethnic group.
171+ I can understand that one may love and hate the same person.
158- I believe that men should act masculine and that women should act in a feminine way.

3.5.6 Problem-solving

(a) Being aware of the problem and intending to deal with it:

208+ I feel that it's possible to deal effectively with most problematic situations one meets (D'Zurilla & Goldfried, 1971).
12+ I believe that when facing a problem, the best thing to do is to stop and think rather than try the first solution that comes to hand (D'Zurilla & Goldfried, 1971).

(b) Defining and formulating the problem clearly:

160+ I like to get a general overview of a problem before trying to solve it (MHP).
34- When looking at a particular situation, I have difficulty seeing what is more important and what is less important.
1+ My general approach in overcoming obstacles is to move step by step.
197+ When faced with a puzzling situation, I like to collect all the information about it that I can (D'Zurilla & Goldfried, 1971).

(c) Generating several solutions:

23+ In handling situations which arise, I try to think of as many possible approaches as I can (D'Zurilla & Goldfried, 1971).
134- When thinking of possible ways of unravelling a puzzling situation, I think that I lack imagination.
95- I believe that there's only one correct solution to any given problem.

(d) Deciding on one or the other of the considered solutions:

45+ When trying to solve a problem, I look at both the pros and cons of each possible solution and then decide on the best course of action.
82- Generally I have difficulty when it comes to making decisions.
69- After thinking of a few possible ways of dealing with a problem, I'm the sort of person who finds it difficult to work out which of the ways is the best (MHP).

(e) Implementing the selected solution through focused and relevant activity:

147- When carrying out a decision and following through with a specific course of action, I find it hard to concentrate and to focus on what I'm doing.
56+ I believe that if you've decided to do something then you must go ahead and do it.
108- When presented with difficulties, I get too tense to work properly.

(f) Evaluating the efficacy of the solution:

219+ After attempting to deal with some difficulty in a particular way, I'm interested in seeing how my approach worked out.
186- Normally I avoid examining the reasons for failing to solve a problem.
173- I believe that because each new situation is different, there's not much that can be gained from past experiences.
230+ After finding a successful solution to something I would try to make use of the solution in the future (MHP).
121+ I believe that if at first you don't succeed it's important to try and try again new and different approaches (Howarth Personality Questionnaire).

3.5.7 Assertiveness

(a) General assertiveness:

2+ I can assert myself without being too cheeky or nasty about it.

(b) The ability to stand up for personal rights:

198+ When someone steps in front of me in a queue I am able to voice my objection (Berneuter Personality Inventory).
35- I feel helpless when I have to stand up for my rights or express my feelings.
83+ If I found that merchandise was faulty, I would take it back to the shop where I bought it and ask in an appropriate way that it be repaired or replaced (Alberti & Emmons, 1974).
24- I'm unable to tell people when they bother me (Johnson, 1981).
57+ If someone kept kicking or bumping my chair in a movie, I would ask him or her politely to stop (Alberti & Emmons, 1974).
187- If a meal were improperly prepared or served at a cafe, I would find it difficult to ask the waiter or waitress to correct the situation (Alberti & Emmons, 1974).
209+ When a salesman tries to sell me something that I really don't want, I'm able to say "no" (Alberti & Emmons, 1974).
220+ I'm able to introduce myself to strangers without great difficulty (MHP).

(c) The ability to express thoughts and beliefs:

231- I'm unable to express my ideas to others.
13+ When I disagree with a person I respect, I am able to speak up for my own viewpoint (Alberti & Emmons, 1974).
70- I would find it difficult to defend my values and principles if my friends strongly disagreed with me (Johnson, 1981).
109+ I'm able to tell my friends exactly what I think about God and religion.
122- If a heated discussion arouse between two of my friends, it would be hard for me to take a definite stand with the one I think is right (George Washington Social Intelligence Test).
135- I find it difficult to tell a domineering person that he or she is wrong (Alberti & Emmons, 1974).

(d) The ability to express feelings:

148- I believe that expressing one's feelings is a sign of weakness (Johnson, 1981).
161+ When I'm cross with someone I can tell him or her about it.
96- It's hard for me to tell someone that I like him or her a lot.
174+ I would be unashamed to express my sadness to those close to me.
46- I'm too embarrassed to laugh out loud.

3.5.8 Reality testing

(a) Reality testing in general:

51+ When relating to others and the world around me, I feel that I have both feet solidly on the ground.

(b) When what is being experienced corresponds to what is

actually there:

(in general):

127- I have had peculiar and strange experiences that cannot be explained.

(cognitively):

101- I am convinced that no one has ever understood or will understand me.
153+ I think that my brain is basically like any other human brain.
179- I have the idea that it's awful and catastrophic when things aren't the way I would like them to be (Ellis, 1962).
166+ I feel that I am in control of my mind.
211- I feel that if somebody disagrees with me it means that he or she doesn't like me (Beck, 1976).
62- Deep down I feel that I need to be liked by most people most of the time (Ellis, 1962).

(perceptually):

88- I have been bothered by hearing voices and strange things that other people do not hear.

(emotionally):

140- I have had periods in which I felt, for no special reason, unusually cheerful or sad (MMPI).

(c) Testing the correspondence between what is experienced and what is actually there:

18+ I try to test out my ideas to see if that's the way things really are.
201+ I try to see things as they really are, without fantasizing or day dreaming about them (MHP).
234+ I test things out before coming to conclusions.
7+ I avoid making generalizations which aren't supported by facts (Beck et al., 1979).
29+ I try to avoid talking about things I know nothing about (Eysenck Personality Inventory).
75+ I can easily pull out of day dreams and fantasies, and tune into the reality of the immediate situation (Jahoda, 1958).
114- It's hard for me to be absolutely sure whether some things have really happened or whether I have dreamt it or just thought that they have happened.
190+ I avoid blowing things up out of proportion (Beck et al., 1979).

(d) That which is tested is then accepted:

40+ I can face the unpleasant realities of life when they occur from time to time (MHP).
223- In order to make a situation easier for me to accept, I tend to make up explanations which aren't true.

3.5.9 Stress tolerance

(a) The ability to withstand adverse events and stressful situations without becoming immobilized, caving-in or exploding:

74+ I can handle tension and stress without getting too nervous or falling apart (Jahoda, 1958).
100- I tend to take difficult situations too seriously and become overwhelmed (Meichenbaum, 1977).

(b) Being able to choose various courses of action:

165+ In tight situations I normally come up with a suitable course of action.

39+ I believe that I am resourceful and effective in dealing with upsetting problems (Seligman, 1975).
178- I am unable to find effective ways of dealing with the normal pressures and strains of living (Conrad, 1952).
50+ When certain situations upset me, I know how to deal with them and try to relax (Meichenbaum, 1977).

(c) Knowing where, to whom and how to turn for support:

17+ I believe that it helps to talk with other people about upsetting problems (Kobasa, 1982).
222- I keep my personal problems and troubles to myself.
211+ If I were told that I was in need of surgery I would talk about it with someone close to me.

(d) Being optimistic about new experiences and about one's ability to overcome the problem at hand:

87+ I believe in my ability to handle most of the upsetting problems I encounter (Meichenbaum, 1977).
6- When I have to learn something new, I see it more as a hassle than as a challenge (South African Personality Questionnaire).
233+ Normally I see change as a challenge and potentially important for further personal development (Kobasa, 1979).
61+ When asked to do work that I'm unfamiliar with, I give it a try and hope for the best (South African Personality Questionnaire).
152- Before I start an exam I find myself thinking that I'm going to fail (MHP).
189+ If I were to have an important interview, I would feel sure of myself and act naturally (South African Personality Questionnaire).

(e) Feeling that one can control or influence the stressful situation:

28- I feel helpless in dealing with serious problems (Seligman, 1975).
113- When faced with serious problems I get physically tense and fear that I'll lose control (Meichenbaum, 1977).
126+ I believe that I have control over what happens in my life (Kobasa, 1979).
200- I'm passive in handling stressful situations and leave the outcome to fate (Kobasa, 1979).
139- I find myself in situations which I know will turn out badly no matter what I do (MHP).

3.5.10 Self-actualization

(a) General self-actualization:

170+ I feel that I'm growing and moving forward as a person (Jahoda, 1958).
92- I feel that in the last few years I have just been marking time, stagnating.

(b) Striving to actualize one's potential capacities:

227+ I try to develop and expand those activities which I enjoy (Conrad, 1952).
183- It's hard to know what I'm good at (Maslow, 1976).
20+ I try to do the best I can in those things I enjoy doing.
131- I'm unable to find enough outlets for my personal interests (Conrad, 1952).
31+ If I liked squash, I would try to observe and play with sportsmen who are better than me in order to improve my game.
9- I think that people like parents and teachers know best what's good for you (MHP).
42+ If I was interested in photography I would try to learn as much as I could about it.

(c) Involved in various interests and pursuits and being committed to purposes and goals:

157+ I'm interested in activities and have goals beyond the needs of everyday life (Jahoda, 1958).
53+ I believe that man does not live by bread alone.
205+ I'm able to lose myself in those activities which I enjoy doing (Jahoda, 1958).
79- I think that it's more important to learn something that's going to help you get on in life even if you don't enjoy it very much, rather than something that really holds your interest but may be less beneficial for you in the long run (MHP).
216+ I love my hobbies (Maslow, 1976).
238- I tend to neglect that which I'm interested in.
144- I lack enthusiasm for my interest.

(d) A life-long effort to enrich one's life:

118+ I make a conscious effort to improve myself and enrich my life (Jahoda, 1958).
194+ I try to make my life as meaningful as I can.
105- I find myself doing things that I'm not interested in (MHP).
66+ I get enjoyment from what I do (MHP).

3.5.11 Happiness

(a) General happiness:

159- I am an unhappy person.

(b) The ability to feel satisfied with and enjoy various aspects of one's life:

120+ I enjoy myself and feel good in activities like work, companionship, play, faffing around, and so forth (Johnson, 1981).
107- It's hard for me to enjoy life (James & Jongeward, 1977).
81+ I am satisfied with my lot (MHP).
133- I'm discouraged about life (James & Jongeward, 1977).
94+ I'm satisfied with and enjoy my family (Conrad, 1952).
146- My interests fail to give me satisfaction and enjoyment (Conrad, 1952).
172+ I enjoy my friends (Conrad, 1952).

(c) The ability to play and have fun:

240+ I like to have fun.
196+ I can let myself go and enjoy myself at a lively party (Eysenck Personality Inventory).
55- I am unable to enjoy my leisure (Alonso, 1961).
22+ I like entertaining and being entertained (Polyfactorial Study of Personality).
11- Recreation is an unimportant part of my life (James & Jongeward, 1977).
33+ I enjoy my weekends.
44- I seem to miss out on enjoying the usual opportunities for pleasure (Jahoda, 1958).
207+ I can feel high without using alcohol or drugs.
185- It's hard for me to smile.
218+ It's easy for me to laugh (Conrad, 1952).
68- I lack a sense of humour.
229+ I enjoy eating.

3.5.12 Faking good

5- I think faster than I can speak (MMPI).
16- It's hard for me to make conversation when I meet new people (MMPI).
27- When I'm in a group of people I have difficulty finding the right things to say (MMPI).
38- There are people whom I dislike.
49- I have done things that I have not felt proud of.
60- There are certain thoughts that I would rather keep to myself.
73- I have said or done things that I have regretted.
86- I have done things that others might think are strange.

99- I have in the past told white lies to protect myself and others (MMPI).
112- I get cross with others.
125- It annoys me when others interrupt or otherwise disturb me when I'm working on something which is very important to me (MMPI).
138- In the past I have avoided others for fear of doing or saying something that I might regret later (MMPI).
151- I have felt like swearing (MMPI).
164- I have been faced with problems in the past.
177- I have felt like smashing things (MMPI).

3.5.13 Faking bad

64- I feel that strangers talk about me everywhere I go.
77- I think that I would have been much more successful and famous if people had not had it in for me (MMPI).
90- I am followed everywhere I go (MMPI).
103- They write terrible things about me in the newspapers.
116- I am convinced that there is something wrong with my mind (MMPI).
129- Someone is trying to steal my thoughts (MMPI).
142- Someone or something is controlling my mind (MMPI).
155- I think that someone is making me do things by remote control.
168- Someone has been trying to kill me (MMPI).
181- I'm bothered by hearing very strange things (MMPI).
192- I hear voices without knowing where they come from (MMPI).
203- I see strange animals and people that others do not see (MMPI).
214- I'm possessed by evil spirits (MMPI).
225- I have a feeling that I must injure either myself or someone else (MMPI).
236- I feel cut off from my body.

3.6 CONSTRUCTION AND INTERNAL DESIGN OF THE 240-ITEM EXPERIMENTAL INVENTORY

3.6.1 Item placement

A semi-random method of item placement was employed. The primary reason for doing this was to prevent the more potentially anxiety-provoking items from appearing in the beginning of the inventory in order to increase better rapport with the examinee. This meant beginning with a non-threatening item in one of the least threatening

personality factors followed by ten additional non-threatening items in the following scales which were semi-scattered. Problem-solving was chosen to be the first scale in that it was thought to be one of the least emotionally laden ones, and the first item selected within this scale was "My general approach in overcoming obstacles is to move step by step". This was selected also for its potentially suggestive nature thought to be implied in the words "to move step by step" which would, hopefully, convey the desired way of completing the inventory.

The order of the remaining scales was randomly determined. Their sequential order was as follows: (1) problem-solving, (2) assertiveness, (3) self regard, (4) interpersonal relationship, (5) faking good, (6) stress tolerance, (7) reality testing, (8) independence, (9) faking bad, (10) social responsibility, (11) self-actualization, (12) flexibility and (13) happiness.

After the order of the scales was decided upon and the least threatening items were selected in each scale, the remaining items were randomly scattered within the scales. Then the first item in each of the scales were listed in the above mentioned order of the scales. After all of the scales had rendered their first (non-threatening) item, the second (randomly selected) item in each scale was listed. This rotation process continued until all items were exhausted.

Since four scales (i.e., interpersonal relationship, social responsibility, and the two sabotage detection scales) had 15 rather than 20 items each, two of these scales were introduced into the above mentioned rotation system starting from the sixth rotation. Items from the other two 15-item scales which were rotated from the outset were exhausted after the 15th rotation, while the first two 15-item scales that

were rotated from the sixth rotation were exhausted with the other scales upon the 20th and last rotation.

3.6.2 Construction of the response format

The response format which was adopted was a 7-point self-rating scale. This scale offered seven ranked values designed to indicate the subjective strength of the individual responses.

Although one of the advantages of the dichotomous format, which was initially considered, is that it forces a response (either a negative or positive one), the lack of a neutral response (e.g., DON'T KNOW, NOT APPLICABLE, SOMETIMES, etc.) often frustrates and irritates respondents and may lead to test sabotaging. Furthermore, a YES/NO or TRUE/FALSE type of response format does not give the respondent latitude to explain the (approximate) degree to which an item does or does not apply to him or her, if at all.

Although the simple trichotomous format offers a neutral middle category to fall back on when necessary and thus has an advantage over the dichotomous format, it does not allow for much variation in conveying to what extent YES/TRUE and to what extent NO/FALSE. When faced with these narrow possibilities at both "extremes", a number of respondents (especially the indecisive, suspicious and non-committal) may fall back on the middle category giving very little information about themselves which can be evaluated.

Not only do more gradations around the mid point present greater response possibilities to choose from in light of the tendency of avoiding extremes (Moser & Kalton, 1971), but an expanded odd-numbered response format is better than the simple trichotomous one for the application of

many statistical procedures.

After considering many different verbal/semantic representations of the seven ranked values, it was decided to use the following: 1=ALWAYS (true of me), 2=VERY OFTEN (true of me), 3=OFTEN (true of me), 4=SOMETIMES (true of me), 5=SELDOM (true of me), 6=VERY SELDOM (true of me), 7=NEVER (true of me).

Anastasi (1982, p. 513) views the 7-point scale as having definite advantages over other response formats used in personality assessment and describes it as a "special feature" of the Comrey Personality Scales which also has a 7-point response format ranging from "always" to "never".

Although there are potential limitations involved in the temporal implications of words like "often" and "seldom", they are preferable to other terms which were considered such as "agree" and "disagree" which were felt to be even more specific and limited because of their attitudinal and cognitive implications at the expense of the behavioural, experiential and emotional.

The following is the initial form of the response format which was used in the pilot study:

EXAMPLE

THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	ALWAYS	VERY OFTEN	OFTEN	SOMETIMES	SELDOM	VERY SELDOM	NEVER
1. I like to eat different types of food.	1	2	3	4	5	6	7
2. I'm careful about keeping in good physical condition.	1	2	3	4	5	6	7
3. Driving makes me nervous.	1	2	3	4	5	6	7

3.6.3 Instructions

Ideas for writing the instructions came from reviewing a number of other self-report inventories. The instructions (Appendix E) introduce the general form of the items and explain how to respond. The respondent is informed that the inventory provides him or her with an opportunity to describe the way they generally are, feel, think and act most of the time and in most situations. The instructions also state that in spite of the fact that some of the items may not be applicable, the respondent is asked to respond in the best way possible to indicate how he or she might think, feel or behave. The respondent is then asked to respond openly and honestly and to indicate how he or she actually is and not how they would like to be or be seen. After receiving examples of three items, the

respondent is instructed to begin on the following page and to consider and respond to every item.

3.7 PILOTING THE EXPERIMENTAL INVENTORY AND THE APPLICATION OF THE RESULTS

3.7.1 Selection of the pilot sample

The first step was to select an appropriate sample of the population on which to pilot the inventory. By an appropriate sample is meant subjects similar to those who would participate in the main experimental phase of the research. The sample of the experimental phase of the study was to be first year university students; therefore, the pilot study needed to tap a smaller and representative sample of this group with similar demographic characteristics. Jackson (1974, p. 15) justifies the selection of university students as appropriate subjects for inventory construction "because of their availability in large numbers and their generally higher motivational level, verbal ability and cooperation."

The writer received the Admission Status List from the Admissions Office at Rhodes University on the 3rd of January 1984. This list contained the names of 255 individuals who were officially admitted and who had notified the university of their intention to begin studying at Rhodes on the 20th of February 1984; many other first year admissions were still being processed at that time. Of the 255 first year students, 191 were White, 50 were Black, 9 were Asian, and 5 were Coloured. The non-white students were not included in the pilot study because of their small numbers which would make the analysis of the data and the

interpretation of the results difficult. The 191 white students were further reduced to 135 after 56 foreigners were excluded from the pilot study; this was done in order to focus on a more homogeneous population. Moreover, only 3 % of this population had one parent who was not English-speaking, meaning that English was definitely the home language in at least 97 % of the the potential respondents which further indicates the homogeneity of the target population (i.e., white English-speaking South African first year university students).

3.7.2 Method of inventory presentation

The students' names and home addresses were received from the Admission Office. Shortly before the commencement of their university studies, each student was posted a booklet containing the inventory, instructions and a cover letter which introduced the inventory as part of a study currently being conducted in the Psychology Department under the writer's direction. The letter stated that participation in various research projects was part of university life. They were assured that their responses would be kept in strict confidentiality and that participation in the research would not affect their future or academic career in any way whatsoever. The subjects were informed about the nature of the research for not only ethical reasons but in order to increase test rapport; openness on the part of the researcher is thought to increase the respondents' general cooperation (Anastasi, 1982, p. 34; Jackson, 1974, p. 5). The respondents were asked to post the completed inventory back to the writer within 20 days. The second page of the booklet contained instructions as to how to complete the inventory (subsection 3.6.3). The booklet containing the cover letter, instructions and the 240-item

inventory appears in Appendix E.

3.7.3 Description of respondents

Within three weeks of posting the 135 booklets, 65 (48 %) were returned. The pilot sample, like the larger sample studied later, was most likely a "biased sample" (i.e., not a true random sample). Although all available subjects within the designated target population were posted an inventory, the completion of the inventories was of course voluntary; and thus it is not possible to know for certain the degree to which the respondents are representative of the target population, meaning that randomness cannot be assumed (Guilford & Fruchter, 1978, pp. 119-121). Jackson (1974, p. 8) summarizes the problem with voluntary participation in research as follows: "Since individuals have free choice in whether or not to participate, strictly random sampling is a goal that would be difficult to achieve under the best of circumstances."

Out of the 65 inventories which were completed in the pilot study, 62 were used in the data analysis stage after three inventories were discarded. One was rejected because the respondent had failed to respond to 30 items representing an omission rate of nearly 13 %, while the average omission rate for the pilot study sample was 0.24 % (MMPI test protocols are rejected when the omission rate exceeds 5 %). The second was discarded because the faking bad score fell three standard deviations below the mean score for this scale, strongly suggesting an attempt to fake bad. The third was discarded because the faking good score approached nearly five standard deviations above the mean for that scale (i.e., a strong indication of faking good).

These 62 respondents represent 46 % of those to whom the

inventory was posted. They were equally divided into 31 males and 31 females. The average age was 20 years and 7 months, with the females being an average of four months older than the males; the minimum age was 18 years and the maximum 34.

3.7.4 The employment of item analysis and the implications and application of the results

The final phase of item selection involved the application of item analysis. This approach of combining statistical methods with conceptual and semantic considerations (the initial stage of item selection) represents a major aspect of the overall research strategy. This phase is similar to Loevinger's (1957) second (or structural) stage and Jackson's (1974, pp. 14-15) second step which focuses on selecting items "based on their structural properties" (p. 7).

[It is important to emphasize that statistical procedures are applied in the present study as an aid in gaining more insight into the proposed concept of psychological well-being; the general approach is not to rigidly accept or reject the results, but rather to view them as indications of how the concept is taking shape. This approach is similar to that of Hays (1973, p. 386) who stresses that "statistical methods are useful only so long as they help, not hinder, the systematic exploration of data and the cumulation and coordination of results." This specific approach to the use of statistics in conceptualization necessitates flexibility in the interpretation of results. However, this approach of "making use of statistics" should not be confused with "using (or abusing) statistics" or ignoring "bad results"!]

One of the key features of item analysis is its ability to reveal

the highest and lowest item-scale correlations. This enables one to differentiate between the "better" (or "stronger") and the "poorer" (or "weaker") items (Guilford & Fruchter, 1978, pp. 457-462). An examination of the correlation coefficients indicates how well the item is doing what the scale itself is doing (Downie & Heath, 1970, pp. 256-257). This information may be used as a basis for deciding which items in a preliminary version of an inventory may be retained and which may be rejected (Magnusson, 1967, p. 209). The items which are retained are generally those which correlate the highest with their scale, while those that are discarded are usually those which have the lowest correlation with the scale (Jackson, 1974, p. 16). This process results in shortening the inventory whilst increasing its discriminative power. It helps to make the individual scales more reliable with the smallest number of items possible (Magnusson, 1967, p. 197)--i.e., the internal consistency or homogeneity of the scales are maximized (Anastasi, 1982, pp. 201-202). Anastasi (1982, p. 192) summarizes this point by saying: "The item analysis option is the only exception to the old statistical axiom that a longer test is more reliable and valid than a shorter one."

Before the first item analysis could be applied, steps had to be implemented in order to meet one of the limitations of the particular item analysis programme which was employed--i.e., a maximum of only 200 items could be analysed at one time. The 240-item inventory had to be reduced by 40 items which was accomplished in two steps. The first step was to do two separate item analyses, one on the 210 personality scale items and one on the 30 sabotage detection items. The second step was to discard at least 10 additional items which had the lowest inter-item correlations within each of the personality scales. This resulted in the discarding of

27 low correlating items. There were only three cases (items 60, 73 and 171--two of which are sabotage detection items) in which items with non-significant inter-item correlations (i.e., less than .21) were retained; these exceptions were made because these items were thought to be important on purely conceptual grounds.

The programme employed to run item analysis was NIPR's (National Institute of Personnel Research) Item Response Evaluation (IRE) known as NP77s (Coulter, 1973), which is essentially an extension of the Gulliksen (1950) item analysis procedures (Coulter, 1973, p.55). It also provided Cronbach alpha coefficients which measure the internal consistency of each scale (Coulter, 1973, p. 13). All other statistical procedures employed in the present research were computed with SPSS subprogrammes (Nie et al, 1975); data storage and processing was carried out on the Cyber 170-825 (Control Data). Parametric statistics, like item analysis, were used throughout the research in that the 7-point experimental inventory is an ordered metric scale (i.e., a scale falling between the ordinal and interval levels of measurement consisting of ordered categories where the relative ordering of the inter-category distances is known even though their absolute magnitude cannot be measured) which allows data to be treated as though it was at the interval level (Abelson & Tukey, 1970; Coombs, 1953, pp. 471-535; Labovitz, 1970 & 1972; Nie et al., 1975, pp. 5, 6).

Six separate analyses were performed on the personality items and two on the sabotage detection items in order to select ten items per scale. This process of running a number of analyses is necessary in that the item and scale statistics change when items are added to or removed from the scales (Coulter, 1973, p. 26). The first of these item analyses

indicated, in general, the strongest items per scale; there were also items that correlated equally as high or higher with scales other than their own. Successive item analyses were carried out after discarding the weakest items and shifting some of those that clearly correlated higher with other scales (i.e., they were shifted only if they appeared logically and conceptually similar to these scales). An example of a weak item (item 37) which was deleted was "I accept others the way they are without trying to change them"--i.e., it failed to demonstrate an item-scale correlation greater that .05 with its own scale or with any other inventory scale. The item "I don't enjoy being with others" (Interpersonal Relationship Scale) was shifted to the Happiness Scale because it correlated much higher with that scale and because it could be justified on conceptual grounds (i.e., it looked like it was related to happiness and was negatively correlated with the way this factor was defined in the present study). Later analyses focused on and examined the "borderline" items which correlated nearly equally as high with more than one scale. After shifting the items to that scale with which it exhibited a nearly equal item-scale correlation, the results were scrutinized to determine if the new item-scale correlations more clearly indicated where best to place the "borderline" item or whether to delete it if similar results were once again received; at times the item was returned to its original scale to see if the next analysis clarified the matter of item placement. This "fine tuning" of the item-scale relationships continued until the best (statistical and conceptual) "fit" was obtained. Each successive analysis created a greater degree of (scale) refinement; each time, one or two of the lowest correlating items were discarded. The sixth item analysis was deemed the final one in that it was not possible

to achieve a better "fit" (i.e., all possibilities were apparently exhausted).

The final selection of items did not depend solely and purely on statistical considerations. If two or more items were observed with nearly equal correlation coefficients, the highest correlating item was not always selected; at times, lower correlating items were retained if they were thought to more closely represent a particular personality factor in general or a conceptual component of that factor. For example, the item (32) "I find it difficult to make changes in my daily routine" (r=.27) was selected and not (item 239) "I like trying new and different things" (r=.28) from the same scale (Flexibility). There was a preference for the shorter, clearer and more concise item between items with similar coefficient values. For example, the item (55) "I enjoy my weekends" (r=.52) was selected and not (item 44) "I seem to miss out on enjoying the usual opportunities for pleasure" (r=.55) from the same scale (Happiness). In a few cases, even a relatively low correlating item was retained if it could be justified as having importance for a particular factor irrespective of its statistical shortcomings. For example, item 56 (Problem-solving) was selected in spite of its relatively low item-scale correlation (r=.21 on the first item analysis) for these reasons--"I believe that if you've decided to do something then you must go ahead and do it." An additional criterion which was used in item selection based on the results of item-analysis was to try to maintain a balance between positive and negative keyed items. For example, a lower correlating positive keyed item was at times selected rather than a higher scoring negative keyed one (and vice versa) if the scale appeared to have a shortage of the former. In the end, 60 of the selected items were

positively keyed and 70 were negatively keyed.

The items that were selected are presented below for each of the scales which are broken down into their conceptual components. The number to the left of each item is the sequential number of that item in the revised experimental inventory, and the number in parenthesis which follows is the item's previous number that appeared in the piloted version of the inventory; this is followed by a "+" sign indicating positive keying or a "-" sign indicating negative keying. The item-scale coefficients based on the final item analysis appears in parenthesis at the end of each item. The Cronbach alpha for each scale appears in parenthesis after the name of the factor; this coefficient indicates the degree of internal consistency (reliability) of the scale. Additional statistical properties of the 240 items are found in Appendix F (i.e., mean, standard deviation, mode, median, skew, kurtosis, the last item-scale correlation, and if it correlated higher on another scale).

3.7.4.1 Self regard (.85):

(a) The ability to view oneself as basically good:

100(199)+ I think that I'm basically a good person (r=.45).

(b) The ability to respect oneself:

35(14)- Deep down I dislike myself (r=.63).
113(210)+ I'm happy with the type of person I am (r=.62).

(c) The ability to accept oneself:

126(221)- It's hard for me to accept myself just the way I am (r=.58).
9(25)+ Looking at both my good points and bad points, I feel good about myself (r=.69).
48(84)+ I'm happy with my physical appearance, with the way I look (r=.66).
74(97)+ I feel comfortable with my body (r=.62).

(d) To feel confident in one's ability to confront life and take control of one's life:

87(126)+ I believe that I have control over what happens in my life (r=.41).
61(152)- Before I start an exam I find myself thinking I'm going to fail (r=.45).
22(57)+ If someone kept kicking or bumping my chair in a movie, I would ask him or her politely to stop (r=.56).

This scale exhibited a very high degree of internal consistency (alpha=.85). The original conceptual components of this definition have been confirmed by the results with only minor exceptions. The ability to accept oneself appears to be a general overall feeling of self-acceptance rather than specific to accepting one's feelings like sadness [item 58 (rejected before item analysis)], fear [item 110 (r=.25)], anger [item 123 (rejected before item analysis)], and sexuality [item 136 (r=.40)]. A general feeling of self-confidence did not hold up well relatively speaking [items 36 (r=.13), 71 (r=.43) and 232 (r=.45)] and must be re-examined and possibly excluded from the present definition of self regard--it appears to be more related to assertiveness [item 71 (r=.57) and item 232 (r=.65)]. Three other items from the assertiveness factor (item 57) and stress tolerance (items 126 and 152) correlated higher with the self regard factor. These items add an additional component to the definition of self regard because of an apparent common quality (i.e., to feel confident in one's ability to confront life and take control of one's life).

3.7.4.2 Interpersonal relationship (.83):

(a) The ability to establish and maintain relationships:

16(72)- I fail to make friendships easily (r=.64).
81(220)+ I'm able to introduce myself to strangers without great difficulty (r=.53).

(b) Mutually satisfying relationships:

42(59)+ I feel that my social relationships are rewarding for both me and my friends alike (r=.68).
86(78)+ I make a conscious effort to work for good relations with and between others (r=.58).
3(22)+ I like entertaining and being entertained (r=.62).

(c) The ability to give and receive affection and intimacy:

55(98)+ I'm able to give and receive warmth and affection (r=.63).
107(150)+ My friends can tell me intimate things about themselves (r=.51).
29(96)- It's hard for me to tell someone that I like him or her a lot (r=.47).
94(148)- I believe that expressing one's feelings is a sign of weakness (r=.54).
120(222)- I keep my personal problems and troubles to myself (r=.48).

This scale demonstrates a relatively high level of internal consistency (alpha=.83). The ability to establish and maintain relationships which are mutually satisfying and, especially, the ability to give and receive affection and intimacy appeared to be confirmed. However, the ability to accept and respect fellow human beings is more related to social responsibility [item 26 (r=.34)]. Items from other factors correlated higher with this one than with their own and tend to bolster the three above mentioned components of the definition. For example, item 220 is apparently related to establishing relationships in general, items 22 and 78 are related to the quality of mutually satisfying relationships, and items 96, 148 and 222 are related to closeness, affection and intimacy within interpersonal relations.

3.7.4.3 Social responsibility (.69):

(a) The ability to accept and respect fellow human beings:

6(26)- It is difficult for me to accept others the way they are (r=.34).

(b) The ability to demonstrate social responsibility:

19(65)+ I'm seen as a person who plays a responsible role in most activities (r=.39).

123(226)- I've been told that I don't have a strong sense of responsibility (r=.30).
110(215)- If I could get away with breaking or bending the law in certain situations I would (r=.46).
45(91)+ I would stop and try to help a crying child find his or her parents even though it was important for me to be somewhere else at the time (r=.29).
58(130)- I think that people who don't have children shouldn't pay taxes for education (r=.36).
32(101)- I am convinced that no one has ever understood or will understand me (r=.47).

(c) To experience oneself as a cooperative, contributing and constructive member in one's social group:

84(169)- I dislike doing errands and helping around the house (r.44).
97(182)- I have the feeling that I don't owe anyone anything in this world (r=. 39).
71(94)+ I'm satisfied with and enjoy my family (r=.55).

The Social Responsibility Scale has relatively "low" internal consistency (alpha=.69). However, the two main conceptual units of this definition were fairly well confirmed (i.e., the ability to demonstrate social responsibility and to experience oneself as cooperative, contributing and constructive). It is interesting to note that an item from Interpersonal Relationship Scale (item 26) related to accepting and respecting others correlated higher on this scale; this points to the need for incorporating this particular aspect into social responsibility. An additional item, from reality testing (101), was shifted to the first conceptual component because it seemed to be related to taking responsibility. Item 94 correlated higher with this scale than with its original scale (happiness) and appeared to be related to the factor.

3.7.4.4 Independence (.82):

(a) Self-directed and self-controlled in one's thinking:

37(30)+ When it comes to making decisions I prefer to rely on my own thinking rather than on advice from others (r=.38).
24(102)- I would prefer others to make the important decisions for me in my life (r=.46).
89(202)+ I like to plan things on my own (r=.43).

115(213)- If I were involved in a project with two other people, I would rely more on their ideas than they on mine (r=.49).

(b) Self-directed and self-controlled in one's actions:

11(63)+ On the whole my actions and behaviour are determined by me (r=.32).
76(191)- I prefer a job in which I am told pretty much what to do (r=.44).
102(235)+ I like to do things on my own, without outside help (r=.44).
50(167)- I'm more of a follower than a leader (r=.45).

(c) Free of emotional dependence upon others:

63(52)+ I avoid clinging to others (r=.51).
128(224)- I seem to need others more than they need me (r=.34).

The internal consistency of this scale is relatively high (alpha=.82), and all of the conceptual components of this factor were well confirmed by its original items. Thus, independence involves being self-directed and self-controlled in one's thinking and actions and fee from emotional dependence upon others.

3.7.4.5 Flexibility (.67):

(a) The ability to adjust one's thinking and feeling to changing situations and conditions:

10(21)- It's difficult for me to change my ideas when new experiences or fresh evidence suggest that I'm wrong (r=.43).
127(184)- I think that there's only one real way of looking at most things in life (r=.44).
36(106)+ I believe that one's political thinking should change with the times and circumstances (r=.31).
75(145)- My ideas about God and religion are unchangeable (r=.30).
62(93)- I disapprove of the way people are experimenting with sex these days (r=.28).

(b) The ability to adjust one's behaviour to changing situations and conditions:

23(32)- I find it difficult to make changes in my daily routine (r=.27).
49(80)- I think that it would be difficult for me to make the necessary adjustments if I were forced to leave my home (r=.36).
114(154)- It was (or is) difficult for me to leave home (r=.38).

(c) The ability to be open and tolerant to differences and ambiguities:

88(171)+ I can understand that one may love and hate the same person (r=.16).
101(158)- I believe that men should act masculine and that women should act in a feminine way (r=.47).

This scale exhibited the lowest degree of internal consistency (alpha=.67) amongst the scales examined. However, this factor demonstrated fairly good confirmation of the original conceptual components. Item 171 was retained in spite of its very low inter-scale correlation because it was thought to be related to this particular aspect of the factor (i.e., it appeared to be a good example of being open to ambiguities). An additional item [154 (r=.38)] correlated higher with flexibility than with its original scale (Independence) and was, hence, shifted and placed in the second conceptual component of this scale in that it was thought to be associated with the behavioural aspect of flexibility (i.e., demonstrating behaviour which is flexible in nature).

3.7.4.6 Problem-solving (.86):

(a) Being aware of the problem and intending to deal with it:

92(208)+ I feel that it's possible to deal effectively with most problematic situations one meets (r=.51).
14(12)+ I believe that when facing a problem, the best thing to do is to stop and think rather than try the first solution that comes to hand (r=.58).
118(233)+ Normally I see change as a challenge and potentially important for further personal development (r=.47).

(b) Defining and formulating the problem clearly:

1(1)+ My general approach in overcoming obstacles is to move step by step (r=.54).
79(197)+ When faced with a puzzling situation, I like to collect all the information about it that I can (r=.51).

(c) Generating several solutions:

27(23)+ In handling situations which arise, I try to think of as many possible approaches as I can (r=.60).

(d) Deciding on one or the other of the considered solutions:

40(45)+ When trying to solve a problem, I look at both the pros and cons of each possible solution and then decide on the best course of action (r=.73).

(e) Implementing the selected solution through focused and relevant activity:

53(56)+ I believe that if you've decided to do something then you must go ahead and do it (r=.29).

(f) Evaluating the efficacy of the solution:

105(219)+ After attempting to deal with some difficulty in a particular way, I'm interested in seeing how my approach worked out (r=.47).

66(121)+ I believe that if at first you don't succeed it's important to try and try again new and different approaches (r=.64).

Very high internal consistency was demonstrated for this scale (alpha=.86). This is interesting in light of the heterogeneous nature of this multi-phasic factor. All of the six stages of problem-solving received at least some degree of confirmation, suggesting that the factor is acceptable in the way in which it was originally defined. Item 233 correlated higher with this scale than with its original scale (Stress Tolerance) probably because of its relationship with and, even, expansion upon the first stage of problem-solving (i.e., being optimistic and intending to deal with new situations and problems).

3.7.4.7 Assertiveness (.81):

(a) The ability to stand up for personal rights:

44(35)- I feel helpless when I have to stand up for my rights or express my feelings (r=.72).

18(24)- I'm unable to tell people when they bother me (r=.61).

(b) The ability to express thoughts and beliefs:

109(231)- I'm unable to express my ideas to others (r=.50).

5(13)+ When I disagree with a person I respect, I am able to speak up for my own viewpoint (r=.42).

57(122)- If a heated discussion arose between two of my friends, it would be hard for me to take a definite stand with the one I think is right (r=.46).
70(135)- I find it difficult to tell a domineering person that he or she is wrong (r=.73).

(c) The ability to express feelings:

83(161)+ When I'm cross with someone I can tell him or her about it (r=.53).
96(136)- It's hard to accept the sexual feelings that surge up within me from time to time (r=.49).

(d) Feeling sure of oneself in relating with others and confronting various situations in life:

31(71)+ I feel sure of myself in most situations (r=.57).
122(232)+ I feel confident when relating to others (r=.65)

The Assertiveness Scale also exhibits a relatively high degree of internal consistency (alpha=.81), and all of the original conceptual components of this factor appeared to receive fairly good confirmation. The ability to express feelings received additional support from item 136 which correlated higher with assertiveness than with its original factor (self regard). Two other items from the self-confidence aspect of the self regard factor (items 71 and 232) correlated higher with the Assertiveness Scale than with their original scale which may shed more light on this definition (and factor); it may be that feeling sure of oneself in relating with others and confronting various situations is related to assertiveness. It was decided to shift these two items from the Self Regard Scale to the Assertiveness Scale, thus, expanding the original definition.

3.7.4.8 Reality testing (.80):

(a) When what is being experienced corresponds to what is actually there:

56(127)- I have had peculiar and strange experiences that cannot be explained (r=.38).

17(34)- When looking at a particular situation, I have difficulty in seeing what is more important and what is less important (r=.39).
69(140)- I have had periods in which I felt, for no special reason, unusually cheerful or sad (r=.37).

(b) Testing the correspondence between what is experienced and what is actually there:

121(201)+ I try to see things as they really are, without fantasizing or day dreaming about them (r=.62).
4(75)+ I can easily pull out of daydreams and fantasies, and tune into the reality of the immediate situation (r=.62).
43(114)- It's hard for me to be absolutely sure whether some things have really happened or whether I have dreamt it or just thought that they have happened (r=.58).
108(190)+ I avoid blowing things up out of proportion (r=.54).

(c) The degree of perceptual clarity evident when assessing and coping with a specific situation:

30(69)- After thinking of a few possible ways of dealing with a problem, I'm the sort of person who finds it difficult to work out which of the ways is the best (r=.51).
82(147)- When carrying out a decision and following through with a specific course of action, I find it hard to concentrate and to focus on what I'm doing (r=.41).
95(186)- Normally I avoid examining the reasons for failing to solve a problem (r=.60).

The Reality Testing Scale exhibited fairly high internal consistency. The ability to test the correspondence between what is experienced and what is actually there fared the best of all the conceptual components. The component which deals with the correspondence between that which one thinks he or she is experiencing and what is actually there was confirmed to a lesser extent. Furthermore, the results indicate that this type of experiencing occurs on a general and emotional level and does not appear to be separated into cognitive and perceptual aspects. Four problem-solving items (34, 69, 147 and 186) correlated higher with this factor than with their own, showing that there is a relationship between reality testing and problem-solving. The nature of these items indicates that this has to do with the cognitive and

perceptual aspects of reality testing. Moreover, there is a basic difference between these four items and the other original problem-solving items; those which were retained emphasized the more cognitive aspects of problem-solving like being systematic and efficiency-oriented, whereas the four which correlated higher on the Reality Testing Scale focus on the ease or difficulty of perceiving and assessing the importance and meaning of the immediate situation. This basic difference explains what happened statistically and justifies their inclusion in the Reality Testing Scale and warrants the expansion of the original definition to include the ability to clearly assess the immediate situation when testing reality. In other words, an important factor in the reality testing process is the degree of perceptual clarity evident when attempting to assess the specific situation at hand. The lack of confirmation for the last conceptual component of the original definition may point to a basic difference between reality testing and the acceptance of reality.

The above results may be explained by the fact that the reality testing definition is too heterogeneous, this is a difficult construct to operationally define (subsections 2.3.2 and 2.3.3.8) and/or it was not adequately tapped by the items that were selected.

3.7.4.9 Stress tolerance (.89):

(a) The ability to withstand adverse events and stressful situations without becoming immobilized, caving-in or exploding:

59(74)+ I can handle tension and stress without getting too nervous or falling apart (r=.59).
33(100)- I tend to take difficult situations too seriously and become overwhelmed (r=.47).
72(108)- When presented with difficulties, I get too tense to work properly (r=.56).

(b) Being able to choose various courses of action:

111(165)+ In tight situations I normally come up with a suitable course of action (r=.49).
7(39)+ I believe that I am resourceful and effective in dealing with upsetting problems (r=.52).
46(50)+ When certain situations upset me, I know how to deal with them and try to relax (r=.81).
124(18)+ I try to test out my ideas to see if that's the way things really are (r=.41).

(c) Being optimistic about new experiences in general and about one's ability to overcome the specific problem at hand:

85(87)+ I believe in my ability to handle most of the upsetting problems I encounter (r=.64).
20(40)+ I can face the unpleasant realities of life when they occur from time to time (r=.48).

(d) Feeling that one can control or influence the stressful situation:

98(113)- When faced with serious problems I get physically tense and fear that I'll lose control (r=.56).

Stress tolerance demonstrated a very high degree of internal consistency (alpha=.89). All except for one part of this definition has been adequately confirmed by the original items and has also received some degree of support from items emanating from other factors. The only conceptual component which did not fare well was knowing where, to whom and how to turn for support during stress; these items correlated higher on interpersonal relationship which was not that surprising because of their very interpersonal nature. Item 108 correlates higher with this factor than with its original one (problem-solving) and tends to relate to the ability to withstand stress without falling apart. Item 40 correlated higher with this factor than with its own (reality testing) and appears to be related to both the ability to withstand stress and being optimistic about the outcome. Item 18 also correlated higher with this factor than with reality testing and is most likely related to being able or willing

to choose various courses of action to deal with stress.

3.7.4.10 Self-actualization (.88):

(a) General self-actualization:

67(170)+ I feel that I'm growing and moving forward as a person (r=.52).
15(92)- I feel that in the last few years I have just been marking time, stagnating (r=.45).

(b) Striving to actualize one's potential capacities:

119(227)+ I try to develop and expand those activities which I enjoy (r=.76).
28(42)+ If I was interested in photography I would try to learn as much as I could about it (r=.61).

(c) Involved in various interests and pursuits and being committed to purposes and goals:

106(216)+ I love my hobbies (r=.50).
93(238)- I tend to neglect that which I'm interested in (r=.53).
41(144)- I lack enthusiasm for my interests (r=.65).

(d) A life-long effort to enrich one's life:

54(118)+ I make a conscious effort to improve myself and enrich my life (r=.61).
80(194)+ I try to make my life as meaningful as I can (r=.70).
2(66)+ I get enjoyment from what I do (r=.64).

This scale also exhibited a very high level of internal consistency (alpha=.88). Also, all of the conceptual components of this factor were also well confirmed. This suggests that the factor can be accepted as originally defined in the present research (subsection 2.3.3.10).

3.7.4.11 Happiness (.90):

(a) General happiness:

91(159)- I am an unhappy person (r=.81).

(b) The ability to feel satisfied with and enjoy various aspects of one's life:

52(120)+ I enjoy myself and feel good in activities like work, companionship, play, faffing around and so forth (r=.63).
39(107)- It's hard for me to enjoy life (r=.80).
26(81)+ I am satisfied with my lot (r=.53).
65(133)- I'm discouraged about life (r=.55).

(c) The ability to play and have fun:

117(240)+ I like to have fun (r=.72).
78(196)+ I can let myself go and enjoy myself at a lively party (r=.62).
13(33)+ I enjoy weekends (r=.52).
104(185)- It's hard for me to smile (r=.71).
130(218)+ It's easy for me to laugh (r=.74).

The Happiness Scale demonstrated the highest level of internal consistency (alpha=.90). This is not surprising in that its definition is simple and homogeneous in nature; furthermore, the items appear to be very similar. Moreover, the conceptual components of this factor were well supported by several of there original items which correlated highly with the Happiness Scale score.

3.7.4.12 Faking Good (.69): The relatively "low" consistency coefficient for this scale indicates that these items do not "hang together" as well as the items of other scales, probably because of their very heterogeneous derivation and nature. The items that were selected for the Faking Good Scale are as follows:

8(5)- I think faster than I can speak (r=.30).
21(38)- There are people whom I dislike (r=.34).
34(49)- I have done things that I have not felt proud of (r=.41).
47(60)- There are certain thoughts that I would rather keep to myself (r=.17).
60 (73)- I have said or done things that I have regretted (r=.19).
73(151)- I have felt like swearing (r=.55).
86(164)- I have been faced with problems in the past (r=.32).
99(86)- I have done things that others might think are strange (r=.45).
112(177)- I have felt like smashing things (r=.48).

125(125)- It annoys me when others interrup or otherwise disturb me when I'm working on something which is very important to me (r=.23).

3.7.4.13 Faking Bad (.77): By comparing the difference in alpha levels, it appears that the faking bad items hang together better than those from the Faking Good Scale. This is probably the case because more than half of the items are related to one type of psychotic behaviour (i.e., thought disturbance), five of which are quite similar (i.e., thought disturbance with paranoid content). The following items were selected for the this scale:

12(90)- I am followed everywhere I go (r=.28).
25(116)- I am convinced that there is something wrong with my mind (r=.55).
38(192)- I hear voices without knowing where they come from (r=.57).
51(129)- Someone is trying to steal my thoughts (r=.54).
64(142)- Someone or something is controlling my mind (r=.50).
77(155)- I think that someone is making me do things by remote control (r=.56).
90(168)- Someone has been trying to kill me (r=.35).
103(203)- I see strange animals and people that others do not see (r=.32).
116(225)- I have a feeling that I must injure either myself or someone else (r=.47).
129(236)- I feel cut off from my body (r=.48).

3.7.5 A general summary of the results of item analysis

As can be observed from the above results, item analysis not only influenced (1) the final selection of items in the shortened 130-item experimental inventory, but it also (2) altered the definitions (and conceptualization) of the personality factors themselves. The average degree of item-scale correlation of items from the same conceptual component of a particular factor indicated the relative strength and importance of that component for the factor (i.e., the extent to which it was doing what the factor as a whole was doing); this is exemplified by the stress tolerance factor which ceded one of its original components

(related to "knowing where, to whom and how to turn for support during stress") based on the results which indicated its relative weakness and deemphasized its importance (i.e., it demonstrated a weak relation to the factor). Furthermore, items which correlated higher on a scale other than their own suggested, at times, a dimension (or conceptual component) of that factor which was previously not considered. For example, this is precisely the way in which the reality testing factor was expanded to include an additional conceptual component (related to "the degree of perceptual clarity evident when assessing a specific situation"). This suggests that some of the items which correlated higher on other factors did so because they were poorly placed initially. It is also the case that the personality factors are in fact interrelated, which explains why some items correlated equally as high or higher on more than one factor. Another explanation has to do with the wording of some of the items. For example, the word "problem" that appeared in a few stress tolerance items could have been associated by some respondents with problem-solving items which made frequent use of this word. Commenting on this point, Jackson (1971) states that "by looking at the results of item analysis, a great deal is learned about how complexities and ambiguities of wording extract a toll." However, it is more logical to assume that conceptual and semantic factors are interrelated and jointly responsible for items that correlated higher on factors other than their own, those which correlated nearly equally as high on more than one scale and for some that did not correlate high on any scale.

3.7.6 Design of the revised experimental instrument

The format of the shortened 130-item inventory was similar to

that of the original 240-item inventory which was piloted (section 3.6).

3.7.6.1 Item placement: The method of placing the 130 items was very similar to that which was employed in the 240-item inventory (subsection 3.6.1). The inventory was formulated such that it would begin with a non-threatening item in a fairly non-threatening scale followed by similar types of items in the subsequent scales which were randomly scattered. Once again, the first scale was Problem-solving which was thought to be the least emotionally laden factor, and the first item was the same as was used in the initial format (subsection 3.6.1). The final placement of scales was as follows: (1) Problem-solving, (2) Self-actualization, (3) Interpersonal Relationship, (4) Reality Testing, (5) Assertiveness, (6) Social Responsibility, (7) Stress Tolerance, (8) Faking Good, (9) Self Regard, (10) Flexibility, (11) Independence, (12) Faking Bad, and (13) Happiness.

After the order of the scales was determined, the listing of the items proceeded like that of the original form of the experimental instrument (subsection 3.6.1).

3.7.6.2 The response format: The only difference in the revised response format was in the reversal of the direction of the 7-point rating scale. The revised response format was as follows : 1=NEVER TRUE OF ME, 2=VERY SELDOM TRUE OF ME, 3=SELDOM TRUE OF ME, 4=SOMETIMES TRUE OF ME, 5=OFTEN TRUE OF ME, 6=VERY OFTEN TRUE OF ME, 7=ALWAYS TRUE OF ME. The lack of a specific characteristic implied by a particular item may more logically be seen as a NEVER response and, hence, should be numerically represented by the smallest value on the

rating scale (i.e., 1); on the other hand, the highest degree of that characteristic should then verbally approximate ALWAYS which should then be represented by the highest value on the scale (i.e., 7).

3.7.6.3 Development of the booklet form of the inventory: The inventory booklet comprised a cover letter, a section designed to collect personal information, a set of instructions, the experimental inventory itself followed by one of three possible psychological tests which was concomitantly administered (Appendix G).

The cover letter was almost identical to the one which was used in the pilot study with only minor alterations. The respondent was informed that the booklet contained two inventories to be completed and required him or her to read each set of instructions before beginning each inventory. They were requested to return the completed booklet to their tutor or directly to the writer in the Psychology Department. An additional difference was the inclusion of a sentence reminding them that they are urged to respond to the inventories on their own and not receive help from anyone else. They were also requested to complete the booklet even if they had participated in the pilot study.

They were requested to indicate their age, sex, ethnic group, language spoken at home, citizenship, faculty and department in which they were enrolled. The respondents were asked to submit their name if they had participated in the pilot study. This information would be used to identify the four month retest population from which subjects could be drawn. They were also asked whether they would agree to be interviewed at a later date and, if so, to fill in their name, address and the various times and days available to them during the week. This was designed to

obtain a subject pool of prospective subjects to be interviewed and/or retested on the experimental inventory after one month.

The instructions were almost identical to those given in the pilot study with only a few exceptions. For example, following the example items, the respondent was presented with a sample item to complete. This offered a chance to test his or her understanding of the instructions. The sample item was specifically designed for its potentially suggestive nature (i.e., "I will respond to the following items according to the above-mentioned instructions").

An additional item (the 131st) appeared in the revised inventory which was not intended to be included in the data analysis phase of the research. It was designed to be a continuation of the instructions (i.e., "I responded to every item in this inventory openly and honestly").

At the end of the inventory, a statement instructed the respondent to read the instructions on the following page before beginning the second inventory contained in the booklet. The first part of the booklet containing the cover letter, the personal information form, the instructions and the experimental inventory is presented in Appendix G.

In that the second inventory was one of three different psychological tests, there were three different versions of the booklet each with a different psychological test and different set of instructions. The instructions and items for the Sixteen Personality Factor Questionnaire (16PF) are found in Appendix H, those for the Personal Orientation Inventory (POI) are in Appendix I, and those for the Ninety Symptom Checklist (SCL-90) in Appendix J.

A fourth version of the booklet was designed for the one month retest sample and clinical subjects which contained only the experimental

inventory. There were minor alterations in the cover letter and the personal information form which appeared on the same page (Appendix K); the instructions remained the same.

CHAPTER FOUR

EXPERIMENTAL DESIGN AND RESULTS

4.1 INTRODUCTION

The present chapter will first describe the way in which the experimental phase of the research was designed (i.e., the research strategy) and then present the results which were obtained from its implementation.

The purpose of the experimental phase is to empirically examine the a priori formulation of psychological well-being based on the foregoing proposed eleven factors. This will be carried out by examining the factorial structure, the validity and reliability of the experimental inventory which is the psychometric model and empirical indicant of the proposed concept (section 3.1). Furthermore, this is an attempt to determine how well the concept can describe and assess psychological health. As an adjunct to the overall strategy, the general properties of the inventory scores will be described in detail; this will be done in

order to provide data on means and distributions, the normality of score distribution, age and gender differences, and the degree of inter-correlation between scales (factors).

4.2 THE RESEARCH STRATEGY EMPLOYED IN EXAMINING THE A PRIORI CONCEPT OF PSYCHOLOGICAL WELL-BEING

It is important to emphasize that the method of examining the concept does not rely on a single test or on a few separate examinations but on a comprehensive research strategy (i.e., this term is used in order to describe the multi-faceted and systematic nature of the methodology involved). The strategy is based on several steps and phases in which various empirical, statistical and non-statistical research procedures are carried out--some are executed separately from and independently of others while a number of them are dependent on and prerequisites for other procedures.

After the general properties of the individual scales are described (i.e., normality of scale score distribution, gender/sex differences and interactions, scale inter-correlations), the factorial structure of the inventory is examined (by factor analysis); this is followed by an examination of its (construct and criterion-related) validity and (internal consistency and retest) reliability.

4.2.1 The method employed to examine the factorial structure of the concept

The primary method employed in examining the factorial structure of the concept (i.e., determining which factors are actually involved) was factor analysis. However, before the items were factor analysed, an

additional item analysis was carried out. The rationale for applying these two methods is discussed below, whilst the specific procedures employed and the results which were obtained are presented in section 4.4.

4.2.1.1 Item analysis: The primary reason for once again employing item analysis at this stage of the research was to confirm the results of the previous item analysis carried out during the pilot study (subsection 3.7.4). It was reasoned that similar item-scale correlations would confirm the degree of internal consistency of the scales (factors); this would demonstrate that the original results were not merely characteristic of the pilot sample but representative of the population as a whole. Furthermore, if the results are confirmed, then these scales may be used again in future research. However, lack of confirmation may necessitate the revision of the inventory.

An additional reason for again using this procedure is that item-scale correlations indicate the internal consistency and relative strength of the factors' various conceptual components as well (subsection 3.7.5), which will be examined in subsection 4.4.1.3.

4.2.1.2 Factor analysis: Factor analysis is a statistical procedure which analyses the interrelationships between variables (Anastasi, 1982, pp. 14, 145-146). It simplifies the description of data by reducing these variables to a few common factors. This enables the researcher to see whether some underlying pattern of relationships exists such that the data may be "rearranged" to a smaller set of factors that may be taken as source variables accounting for the observed interrelations. As such, factor analysis represents one of the major phases and features of the

research strategy since it examines the factorial structure of the proposed concept. In other words, this procedure is applied to see how well the proposed eleven personality factors "hold up and hang together". It is a way of statistically examining the results of logically clustering the major personality factors thought to be related to psychological well-being (subsection 2.3.1); this combined technique was the way in which the key personality factors involved in the concept were identified. There are three general outcome possibilities: (a) the original factorial structure of psychological well-being will be confirmed, (b) it will be altered to some degree, or (c) the basic proposed structure will be rejected and a different structure will emerge. As was previously hypothesized in section 2.4, it is expected that the basic structure will be confirmed.

4.2.2 The methods employed to examine the validity of the individual factors

Validity is the degree to which an indicant or set of indicants measures the concept it is intended to measure (Magnusson, 1967, p. 59; Zeller & Carmines, 1980, p. 14); and a measuring instrument is considered valid "if it does what it is intended to do" (Nunnally, 1967, p. 75). Examining the validity of the experimental inventory in the present study is essentially evaluating how successful it is in describing and assessing psychological health; and this is of prime importance in that the inventory is the empirical indicant of the proposed concept of psychological well-being. Thus, examining the validity of the experimental inventory is in essence examining the validity of the concept itself.

Validation of an inventory, scale and/or concept entails a lengthy evaluation of various combinations of studies designed to examine and estimate content, face, construct, criterion-related and predictive validity. Although one can and does concentrate on one or another of these types of validity, methodological thoroughness dictates an intensive and extensive study of as many approaches to validation as possible. This is necessitated by the fallibility of any single measure of validation (Bohrnstedt, 1970, p. 95). More succinctly, in that appropriate inferences about the theoretical structure is potentially distorted by undetected method artifacts (e.g., stemming from the measures employed as well as the response sets of the respondents), one can only estimate validity (and reliability) after several different tests of correlation and significant differences are applied to the data (Zeller & Carmines, 1980, pp. 77-78).

This subsection presents and describes the rationale for examining the content, face, construct and criterion-related validity of the factors upon which the a priori concept of psychological well-being is based. The specific procedures that were applied and the results which were obtained are found in section 4.5.

4.2.2.1 Content and face validation: This type of "validity" is not validity in the statistical sense. Content validation is "the systematic examination of the test content to determine whether it covers a representative sample of the behavior domain to be measured" (Anastasi, 1982, p. 131), and face validity "pertains to whether the test 'looks valid' to the examinee" (Anastasi, 1982, p. 136). With respect to both types of validity, the inventory was validated primarily by the way in

which the items were generated and selected, and the extent of this type of validation is subsequently examined by item analysis. This will be discussed in detail in subsection 4.5.1.

4.2.2.2 Construct validation: Construct validity indicates the extent to which a measure of a given construct, concept or variable measures what it purports to measure (Guilford & Fruchter, 1978, pp. 436-437). In the present study, this is asking how well the experimental inventory is assessing psychological health (and tapping the proposed concept) and to what extent its scales are measuring the factorial components of this construct--i.e., the degree to which the inventory is performing with respect to theoretical expectations (Anastasi, 1982, p. 144; Zeller & Carmines, 1980, p. 102). Thus, this represents one of the most important examinations of the a priori formulation.

The most common method of estimating construct validity is to examine the degree of correlation between the measuring instrument (i.e., the experimental inventory) and various other tests or inventories which are assumed to measure the same or similar variables (Anastasi, 1982, p. 144; Downie & Heath, 1970, pp. 245-250; Guilford & Fruchter, 1978, pp. 436-437; Magnusson, 1967, pp. 131-132). This will be carried out by correlating the scale scores on the experimental inventory with various scale scores of three concomitantly administered tests (i.e., the external criterion scales). Each inventory scale will be correlated with at least one of the 16PF, POI and/or SCL-90 scales which are described in detail in subsection 4.3.1.3. The selection of the specific external criterion scale or scales to be correlated with each experimental inventory scale is based on the similarity of the content domain between them which is

discussed in detail in subsection 4.3.1.3; results of this correlation study will be presented and discussed in subsection 4.5.2.

It is important to bear in mind that the validation of an inventory or concept as a whole or in part is not determined solely by the presentation of a few "good" (i.e., high) or "poor" (i.e., low) correlation coefficients. Construct validation is a lengthy process which comprises numerous validity studies conducted by many researchers on various samples. It is hoped that the way in which construct validation is carried out in the present study will give an indication of the validity of the inventory and proposed concept.

4.2.2.3 Criterion-related validation (convergent and discriminant types): Criterion-related validity may roughly be divided into convergent and discriminant types; the former examines the degree of correlation between a measure of a concept or variable and an external criterion of that variable, and the latter examines the extent to which a measuring instrument can significantly discriminate the presence or absence of the variable it is designed to measure (Anastasi, 1982, pp. 137-138; Downie & Heath, 1970, p. 250; Magnusson, 1967, p. 128; Zeller & Carmines, 1980, pp. 79-80).

Convergent criterion-related validity will be assessed by two methods: (a) by examining the degree of correlation between inventory scale scores and between other-observer ratings and self-assessments of the factors involved for those subjects who will be interviewed, and (b) by studying the degree of correlation between the inventory's overall psychological health score and the need for psychological help as

expressed by the interviewees. Other-observer ratings and self-assessments are considered to be valuable external criteria for this type of validation (Anastasi, 1982, p. 142). The procedures and results will be presented and discussed in subsection 4.5.3.

Two approaches to examining discriminant criterion-related validity will be carried out. The first will be to test the level of significant differences on the inventory's scale scores between subjects who are divided into three psychological health groups (i.e., below average, average and above average psychological health) based upon the results of the three concomitantly administered self-report inventories; and the second will be to test the level of significant differences on these same scale scores between a clinical sample and a matched group from the general sample. The procedures and results are presented and discussed in subsection 4.5.4; the results are expected to shed light on the ability of the scales (factors) to significantly distinguish between individuals who possess various degrees of psychological health.

4.2.2.4 <u>The issue of predictive validity</u>: The two types of criterion-related validity mentioned above (i.e., convergent and discriminant) are often referred to as "concurrent" in that the external criteria are available at the time of testing or shortly after. Another form of criterion-related validity is referred to as "predictive" validity which can be of the convergent or discriminant type as well. The major difference between the two is that the external criterion in predictive validity is made available at some future time after testing. The external criteria are related to what the measuring instrument is

purported to measure (Anastasi, 1982, p. 137). Concurrent validation is relevant to inventories employed for assessing existing status rather than prediction of future outcome; Anastasi (1982, pp. 137-138) points out that the difference can be illustrated by asking: "Is Smith neurotic?" (concurrent validation) or "Is Smith likely to become neurotic?" (predictive validation).

Although the conventional approach to this type of validation will not be attempted in the present research in spite of its importance, the predictive ability of the experimental inventory (and concept) can be roughly estimated by examining the general level of its concurrent criterion-related validity (Anastasi, 1982, p. 137). Future research in this area should, however, consider the more conventional approach. Predictive studies are difficult to undertake because of the "expense, commitment, and time involved" (Offer & Sabshin, 1974, p. 147); this type of validity was considered to be beyond the scope of the present research.

4.2.3 The methods employed to examine the reliability of the individual factors

Whereas validity attempts to determine how well an inventory is doing what it is supposed to do (subsection 4.2.2), reliability is concerned with its consistency and stability over time. The two types of reliability which are examined in the present research are internal consistency and retest reliability.

4.2.3.1 Internal consistency: Guilford and Fruchter (1978, p. 420) point out that the concept of internal consistency comes the closest to the basic idea of reliability. This procedure makes an estimate of

reliability from a single administration of an inventory and provides a measure of consistency with regard to content (Anastasi, 1982, pp. 113-116). Internal consistency will be assessed in the present study by examining Cronbach alpha coefficients (subsection 3.7.4). An additional approach which is used is to examine the average item-scale correlations for each of the scales based on the results of item analysis. The results will be presented and discussed in subsection 4.6.1.

4.2.3.2 Retest reliability: Another important and valuable method of evaluating reliability will be carried out in the form of a test-retest examination of the experimental inventory. This approach to estimating reliability is similar to that of internal consistency; however, it differs from it in that consistency over time (or stability) is observed rather than the immediate consistency of a scale at a particular point in time. Retest reliability indicates how well what is being measured by an inventory or scale holds up over time (Guilford & Fruchter, 1978, p. 419; Magnusson, 1967, p. 119). The method simply involves retesting the same subjects on the same inventory on another occasion or occasions.

The measure of retest reliability is then based on the correlation of the subjects' responses from one period to another. It is assumed that the higher this correlation is, the greater is the instrument's stability reliability. Not only does this reflect one aspect of the strength of the instrument involved, but, more importantly, it indicates the state and trait quality of the personality factors being studied. High correlations suggest personality traits which hold up over time. On the other hand, low correlations from testing to testing may indicate not only poor stability of the measuring instrument over time

but the possibility of highly changeable emotional states which tend to fluctuate.

According to Anastasi (1982, p. 110), the retest interval should not be too short nor should it exceed six months. It was decided to chose a "shorter" and "longer" retest interval within this suggested period. The long retest interval was chosen to be four months and the shorter one was one month from the initial time of testing. Too short an interval (i.e., less than one month) runs the risk of being contaminated with a memory factor (i.e., the correlations being a function of memory rather than representative of true variance) according to Downie and Heath (1970, p. 243).

The selection and examination of the subjects are described in subsection 4.3.3, and the results are discussed in subsection 4.6.2.

4.3 THE MANNER IN WHICH THE VARIOUS SAMPLES WERE EXAMINED

Prior to examining (and in order to examine) the factorial structure of the concept and the validity and reliability of the factors upon which it is based, subjects had to be tested on the experimental inventory and on other psychometric instruments, a number of subjects had to be interviewed and retested on the inventory, and a clinical sample had to be selected and tested on the experimental inventory.

This section describes and discusses the manner in which the various samples were examined and presents the results which were obtained. The results provide descriptive information about the general properties of the scales for the general sample (i.e., normality of distribution, gender and age differences on test performance, and inter-correlation between scales).

4.3.1 The administration of the experimental inventory and the concomitantly administered tests to the general sample

4.3.1.1 Selection of the subjects: After receiving a list of first year undergraduate students from the Administration Division at Rhodes University, the size of departments and student distribution were examined.

In order to reduce the possibility of overlap, an effort was made to select large departments that were as distantly related as possible. For example, within the Faculty of Arts, the two large departments selected were Psychology (223 students) and History (104 students) with Physical Education being the smallest (55 students) chosen. The Department of Business Administration was selected as the largest department (173 students) within the Faculty of Commerce and was composed primarily of business majors. The Chemistry Department was selected within the Faculty of Science because it was the largest (151 students) and because it included almost exclusively natural science majors. The Department of Education within the Faculty of Education was the smallest department selected (45 students). It was thought that there was sufficient distance and separation between students studying psychology, history and education on the one hand from those studying business administration, chemistry and physical education on the other. Hence, the selection of these particular departments was varied enough as to increase the diversity of academic interest amongst the prospective respondents and to decrease the possibility of overlap.

This process rendered 751 first year undergraduate students. The total number of those who responded and participated in the experimental

phase of the research was 351. Of this number, 51 inventories were discarded from the analysis of data for two basic reasons. In that the research focused only on white English-speaking subjects for the sake of sample homogeneity (subsection 3.7.1), 38 subjects who did not fall into this category were discarded. This group included six Coloured, seven Indians, 12 Africans, ten non-English-speaking whites (mainly Afrikaans-, German- and Dutch-speaking), and three respondents who did not indicate their ethnic group. The small size of all of these ethnic groups could not justify a cross-cultural comparison with the much larger white English-speaking group. Furthermore, the small size of these samples would obviously reduce the male/female breakdown making even nonparametric studies most difficult to assess. The second reason for discarding inventories was because of suspected test sabotaging which included 13 subjects: nine with omission rates greater than 5 %, one for inconsistent responding (a zig-zag configuration that continued throughout most of the booklet), two for suspected faking good and one for faking bad (their sabotage detection scores deviated two to five standard deviations from mean score values).

The deletion of the above 51 subjects meant that 300 inventories were initially analysed (22 clinical subjects were subsequently added). Every participant filled in the experimental inventory, but a number of subjects participated in more than one phase of the experiment. For example, one could have been retested on the experimental instrument after one month, have filled in the 16PF and have been interviewed in addition to completing the experimental inventory.

The white English-speaking sample without the clinical subjects (i.e., the general sample) numbered 300; this included 141 males (47 %)

and 159 females (53 %). The average age of the general sample was 20 years and one month with a standard deviation of 2.8; the mean age for the male subjects was 20 and five months with a standard deviation of 2.6 and 19 years and 11 months with a standard deviation of 3.0 for the females. Of these 300 subjects, 54 (18 %) did not specify the academic faculty in which they were enrolled. Table 4.1 compares 246 subjects from the general sample in the experimental phase with the pilot study sample (N=62) and the total number of white first year undergraduates at Rhodes University (N=611) by enrolment in academic faculty. In light of the fact that there is disparity between the three groups being compared, percentages are presented for the purpose of making comparison easier (the actual number of subjects in each group appears in parenthesis).

TABLE 4.1

FACULTY ENROLMENT BROKEN DOWN BY PERCENTAGES FOR THE GENERAL EXPERIMENTAL SAMPLE, THE PILOT STUDY SAMPLE AND THE TOTAL POPULATION OF WHITE FIRST-YEAR UNDERGRADUATES

FACULTY	EXPERIMENTAL SAMPLE	PILOT STUDY SAMPLE	FIRST-YEAR UNDERGRADUATES
Arts	41.5 % (102)	50.0 % (31)	38.6 % (236)
Commerce	26.8 % (66)	22.6 % (41)	24.1 % (147)
Science	11.4 % (28)	9.7 % (6)	19.5 % (119)
Pharmacy	4.1 % (10)	9.7 % (6)	9.3 % (57)
Education	4.9 % (12)	3.2 % (2)	3.0 % (18)
Divinity	1.2 % (3)	1.6 % (1)	2.0 % (12)
Social Science	10.2 % (25)	3.2 % (2)	3.4 % (21)
Law	-	-	0.2 % (1)

Despite some disparity, the participants in the experimental phase of the research are similar to those who participated in the pilot study in respect to general academic interest as is indicated by faculty enrolment. Furthermore, the subjects' academic interest is fairly

representative of the target population of white first-year undergraduates at Rhodes University. In addition to the fact that both pilot study and experimental samples were composed of white English-speaking South African first-year university students, both groups of subjects were approximately the same age and had a very similar male and female breakdown (subsection 3.7.3).

4.3.1.2 Method of administrating the experimental inventory: In each of the six departments which were approached, the first year coordinator was contacted and received a brief description of the nature of the research. They were given basic instructions to be conveyed to first year tutors. The tutors were asked to give a brief introduction to their students about the research project and to state that participation was voluntary and would not affect their future in any manner. They were instructed to ask the students to read the cover letter and instructions before completing the booklet (Appendix L). The booklets were then distributed in the next tutorial meeting by the tutors who asked the students to return them by the following session or see to it that they got to the writer in the Psychology Department.

The students were told not to complete the booklet if they had already done so in another tutorial.

As was previously mentioned (subsection 3.7.6.3), the experimental inventory was presented in booklet form together with one of the three other psychological tests. One third of the booklets administered contained the 16PF, one third the POI and one third the SCL-90 together with the experimental inventory (Appendices G through J).

Tutors were instructed to remind the students to return the completed booklets for three consecutive tutorial sessions; and the tutors

were asked to pass the completed booklets in to the first year coordinators in their department. The writer was in weekly contact with these people in order to collect the completed booklets; some were directly given or posted to the writer.

4.3.1.3 The concomitantly administered tests: The 16PF, POI and SCL-90: A number of psychological tests were considered for being administered concomitantly with the experimental inventory for two basic reasons. The first was that one form of validity to be examined would be based on studying the degree of correlation between the experimental inventory scales and (external criterion) scales on other self-report inventories (subsection 4.2.2). The second reason was that the results of these other inventories would be used to divide the general sample into three psychological health groups (i.e., below average, average and above average) in order to examine another type of validity later on (subsection 4.2.2.3). This method was also employed by Grinker and Werble (1974) who used various concomitantly administered tests to divide their subjects into different groups based on the degree of their psychological health; it was also used by Danet (1965) and by Offer and Howard (1972) for the same reason. Therefore, two important considerations in selecting the psychological tests to be administered was the general similarity between their scales and those of the experimental instrument and their ability to differentiate individuals possessing various degrees of psychological health. It was reasoned that no one test would or could possess scales which were closely comparable to all of the 11 personality scales of the experimental instrument; if this was the case, there would be no reason to construct an experimental inventory in order to examine the a priori concept. Therefore, the pooling together of a few tests was the method of

choice; this would render a variety of different scales that could be compared with those of the inventory. An additional consideration was that they would have to demonstrate good validity and reliability; tests with poor validity could not be used to validate the experimental inventory. An additional consideration was the length of the tests; too lengthy a test together with the 130-item experimental instrument might tire and/or irritate respondents which could result in test sabotaging of one form or another. It was also thought desirable that these tests or any combination thereof, be based on a continuum approach with respect to the variables that they are purported to measure.

Based on the above considerations, the Sixteen Personality Factor Questionnaire (16PF), the Personal Orientation Inventory (POI) and the Ninety Symptom Checklist (SCL-90) were selected. It is interesting to note that in addition to satisfying the primary research needs, these three tests appear to complement one another in respect to the last above mentioned consideration. For example, the POI was constructed primarily to examine self-actualization (subsection 2.2.2.1) and, therefore, focuses more on the positive psychological health end of the continuum but also relates to degrees of non-actualization in the pathological direction; it was thus thought to be more sensitive in distinguishing average from above average psychological health. On the other hand, the SCL-90 focuses more on the pathological end of the continuum in relation to "normality" and was thought to be more sensitive in differentiating between below average and average psychological health. And finally, the 16PF appears to differentiate between optimal, pathological and average levels of well-being on a number of different personality factors.

Each of these three tests will be described in more detail below.

(1) The Sixteen Personality Factor Questionnaire (16PF): The 16PF has been found to be a valuable evaluative inventory in personality assessment (Buros, 1965). The A Form was employed in the present research which is composed of 187 items and is suitable for subjects from 15 years of age. It takes approximately 50 to 60 minutes to complete (Cattell et al., 1970).

The inventory yields scale scores on 16 primary factors. Eight of these factors were used and are listed and briefly described in Table 4.2.

TABLE 4.2

A DESCRIPTION OF HIGH AND LOW SCORES FOR THE 16PF FACTORS (CATTELL ET AL., 1970) WHICH WERE EMPLOYED IN THE PRESENT RESEARCH

FACTOR	HIGH SCORES	LOW SCORES
C	calmly faces difficulties, calm, ego strength, stable, does not let emotional needs obscure reality of situation, faces reality	affected by feelings, ego weakness, emotionally unstable, changeable
E	assertive, aggressive, competitive, independent, excitable	phlegmatic, submissive, obedient, accommodating
F	generally happy, cheerful, enthusiastic, expressive, surgent	serious, reflective, introspective, desurgent
G	superego strength, conscientious, responsible, dependable, moralistic, driven to do one's best, disciplined and systematic perserverance in problem-solving	low superego strength, expedient, self-indulgent, undependable
H	desires establishing friendly relations, bold, adventurous	timid, restrained, withdrawn
O	insecure, guilt proneness, apprehensive, sensitive	feels secure and adequate, self-assured, self-confident, untroubled, placid
Q2	independent, preference for independent decision-making, self-directed, self-sufficient, resourceful	group dependent, a joiner and follower
Q4	tense, frustrated, overwrought	relaxed, tranquil, composed

C=emotional stability; E=assertiveness; F=happiness; G=contientiousness; H=venturesomeness; O=placidity; Q2=self-sufficiency; Q4=tranquility

With respect to construct validity, the 16PF measures about the same factor space (content domain) as the Guilford-Zimmerman Temperament Survey (Buros, 1978); it has demonstrated satisfactory to good factorial validity (Buros, 1978). Its discriminant validity is good for most of the factors (Buros, 1978). Internal consistency coefficients range from .48

to .75 with a median of .59 for the eight factors which were selected (Buros, 1978). Retest reliability after two months ranges from .63 to .88 for the 16 scales with a median of .78 (Buros, 1978).

(2) The Personal Orientation Inventory (POI): The POI is a self-report inventory designed to assess values, attitudes and behaviour relevant to Maslow's concept of the self-actualizing person (subsection 2.2.2.1). There are 150 items; in each item, the subject is asked to choose between two opposing statements related to himself or herself. The adult form of the POI was used in the present research which is applicable from 17 years of age and takes approximately 30 minutes to complete (Buros, 1978).

Six of the 12 POI scales were used in the present research and are listed and briefly described in Table 4.3.

TABLE 4.3

A DESCRIPTION OF HIGH SCORES FOR THE POI SCALES (SHOSTROM, 1974) WHICH WERE EMPLOYED IN THE PRESENT RESEARCH

SCALE	THE CONTENT DOMAIN OF THE SCALES (HIGH SCORES)
I	(85 % of the inventory items), the tendency to be guided by one's own principles and motives, inner support
Ex	Valuing flexibility in applying one's principles, the ability to situationally or existentially react without rigid adherence to principles, existentiality
S	Spontaneity, free expression of one's own feelings
Sr	Self regard, attitudes toward the self, the liking of one's self as a person, affirmation of self because of worth and/or strength
Sy	The perception of opposites in life as really having something in common, the ability to transcend dichotomies, synergy
C	A capacity for intimate contact, the desire to respond to expectations and obligations without becoming a slave to them and without using them to exploit people

I=inner support; Ex=existentiality; S=spontaneity; Sr=self regard; Sy=synery; C=intimate contact

The normative data are biased toward a university student population, mainly first year undergraduate students, which was one of the reasons why the POI was employed in the present research.

The criterion-related validity of the POI is purported to be good with correlations ranging from .23 to .69 when correlated with other-observers' ratings of the constructs (McClain, 1970). Zaccaria and Weir's (1967) findings suggest that the POI possesses good discriminant validity; all of the scales significantly distinguish between clinical and non-clinical samples (one at the .05 level and the rest at or beyond the .01 level). This is also supported by earlier studies (Knapp, 1965) in which significant differences at or beyond the .05 level have been

demonstrated between the performance of "low" and "high" neurotic groups which were divided by results obtained from the employment of the Eysenck Personality Inventory. Furthermore, in five out of six therapy studies cited by Shostrom (1974), all of the scales significantly distinguished between psychiatric patients, non-patients and self-actualizing people. Reliability coefficients range from .55 to .85 (Buros, 1972). Retest reliability after one week ranges from .52 to .82 with a median value of .71 (Klavetter & Mogar, 1967), and from .32 to .74 at 50 weeks with a median value of .58 (Ilardi & May, 1968).

(3) The Ninety Symptom Checklist (SCL-90): The SCL-90 is a 90-item self-report symptom inventory (Derogatis, 1973). It is a measure of current, point-in-time, psychological symptom status. This inventory is not a measure of personality, except indirectly, in that certain personality "types" or "disorders" may manifest a characteristic profile on the primary symptom dimension. The SCL-90 may be utilized from 13 years of age. The form used in the present research was the revised form, the SCL-90-R (Derogatis, 1973). Under usual circumstances, it requires between 15 and 20 minutes to complete.

Each item is rated on a 5-point scale of distress (0 to 4), ranging from "not at all" at one pole to "extremely" at the other. It is scored and interpreted in terms of nine primary symptom dimensions and three global indices of distress. Five primary scales and one global scale were employed in the present research and are described in Table 4.4.

TABLE 4.4

A DESCRIPTION OF HIGH SCORES FOR THE SCL-90 SCALES (DEROGATIS, 1973) WHICH WERE EMPLOYED IN THE PRESENT RESEARCH

SCALE	THE CONTENT DOMAIN OF THE SCALES (HIGH SCORES)
INT	Interpersonal sensitivity, negative expectations concerning communication with others and interpersonal behaviour, feelings of uneasiness and marked discomfort during interpersonal interactions, self-consciousness, feelings of inadequacy and inferiority, self-deprecation
DEP	Depression, withdrawal from life interests, loss of motivation and vital energy, suicidal signs
ANX	Anxiety, nervousness, tension, apprehension, dread, terror, panic
HOS	Hostility, irresponsible behaviour, aggression, lack of acceptance of and cooperation with others, a disinclination to contribute to the group, feelings or actions characteristic of anger, irritability, rage and resentment
PSY	Psychoticism, symptoms of schizophrenia such as hallucinations and thought disturbances like delusions and thought-broadcasting, withdrawal, schizoid life styles
GSI	Global severity index (the overall level of distress or psychopathology, the current depth of disturbance)

INT=interpersonal sensitivity; DEP=depression; ANX=anxiety; HOS=hostility; PSY=psychoticism; GSI=global severity index

The SCL-90 was developed on three major normative sources: (a) a sample of heterogeneous psychiatric out-patients, (b) a sample of adolescent psychotic out-patients, and (c) non-patient "normals".

Dinning and Evans (1977) present findings which indicate that the SCL-90 demonstrates good construct validity. When correlated with the MMPI, construct validity coefficients ranged from .44 to .58 (Derogatis et al., 1976). Furthermore, all scales have proved to significantly distinguish various levels of psychological health beyond the .05 level which suggests good discriminant validity (Clark & Friedman, 1983). The findings of Green et al. (1975) indicate that internal consistency

reliability ranges from .77 to .84; this is supported by Holcomb et al. (1983) who presented consistency coefficients ranging from .56 to .96 with an average of .81.

After reviewing each of the above-mentioned self-report inventories, the scales listed in the three tables above (4.2 through 4.4) were singled out because of their similarity to the experimental inventory's scales. Table 4.5 reveals the specific external scales which are to be compared with each inventory scale in an effort to examine construct validity (subsection 4.2.2.2).

TABLE 4.5

THE EXTERNAL SCALES (FROM THE 16PF, POI AND SCL-90) WHICH ARE TO BE COMPARED WITH THE EXPERIMENTAL INVENTORY SCALES

INVENTORY SCALE	16PF	POI	SCL-90
Self Regard	O	Sr	INT
Interpersonal Rel.	H	C	INT
Soc. Responsibility	G	----	HOS
Independence	E, Q2	----	-
Flexibility	----	Ex, Sy	-
Problem-solving	G	S	-
Assertiveness	E	----	-
Reality Testing	C	----	PSY
Stress Tolerance	C, Q4	----	ANX
Self-actualization	G	I	DEP
Happiness	F	----	DEP
Psychological Health	----	----	GSI

4.3.1.4 Descriptive statistics: This subsection presents the descriptive statistics of the experimental inventory and the concomitantly administered tests.

(1) Descriptive statistics related to performance on the experimental inventory and general properties of the scales involved: Table 4.6 reveals a detailed description of the scale scores of the experimental instrument for the general sample; descriptive statistics for each of the 130 items for this sample are found in Appendix M. Responses for all negative keyed items was reversed (e.g., 7=1, 6=2 and so forth); this created a 7-point rating scale for every inventory scale on which a score of "1" indicates the lowest degree of each personality factor (and overall psychological health) and "7" indicates the highest degree. Scale scores were then created by adding the responses for each of the items in the scale. An overall psychological health score was calculated by adding the 11 personality scale scores. Higher scale scores (i.e., in the direction of 70) indicate a greater degree of the personality factors (and overall degree of psychological health) involved whilst lower values (i.e., in the direction of 10) indicate the opposite. The lower the score for the Faking Bad Scale, the greater is the possibility that the respondent is attempting to fake bad; the higher the Faking Good score, the greater the likelihood that the respondent is attempting to fake good.

There was no attempt to convert raw scale scores into weighted scores. The positive effect of weighting scale scores in terms of accuracy is often overestimated especially when there are several scales which have similar standard deviations and similar degrees of correlation between themselves and between the total score (Magnusson, 1967, pp. 153-155); and in such situations, as in the present research, scale scores can be summed unchanged (Anastasi, 1982, p. 174; Cattell, 1952, p. 80). Kurtosis indicates the degree of steepness or peakedness of the middle part of the distribution of cases (i.e., the vertical orientation); a

value of zero indicates the height of a normal or mesokurtic distribution, a positive value indicates a peaked or leptokurtic curve, and a negative value indicates a flattened or platykurtic curve (Downie & Heath, 1970, pp. 28, 69; Guilford & Fruchter, 1978, p. 155; Hays, 1973, p. 248; Nie et al., 1975, p. 185). Skewness describes the degree to which the cases cluster around the mean which is indicated by a value of zero (i.e., the horizontal orientation of the distribution); a positive value of skewness indicates the cases are clustered to the left of the mean while a negative value indicates clustering to the right, and the larger the value of skewness the greater the amount of skewness (Downie & Heath, 1970, pp. 28, 68; Hays, 1973, p. 248; Nie et al., 1975, pp. 184-185). When the values of kurtosis and skewness approach zero, the distribution of cases approximates a normal or symmetric bell-shaped curve.

TABLE 4.6

DESCRIPTIVE STATISTICS RELATED TO PERFORMANCE ON THE EXPERIMENTAL INVENTORY SCALES FOR THE GENERAL SAMPLE (N=300)

SCALE	MEAN	S.D.	MODE	MEDIAN	KURTOSIS	SKEWNESS
Faking Good -------	34.8	7.6	31	34.6	1.217	.404
Faking Bad --------	61.7	6.8	65	63.7	-.087	-.879
Self Regard -------	48.6	8.8	45	48.8	-.372	-.220
Interpersonal Rel.	49.9	8.3	52	50.3	.898	-.546
Soc. Responsibility	49.7	7.0	52	50.4	1.502	-.783
Independence ------	50.1	7.6	53	50.1	-.446	-.018
Flexibility -------	44.8	7.9	45	44.6	.064	.042
Problem-solving ---	53.8	7.2	50	53.8	-.168	-.084
Assertiveness -----	47.5	8.3	49	48.5	-.093	-.228
Reality Testing ---	48.1	6.9	46	48.2	-.096	-.263
Stress Tolerance --	48.5	7.8	51	49.0	-.298	-.197
Self-actualization	53.9	8.0	57	55.1	-.374	-.314
Happiness ---------	54.7	8.4	58	56.3	3.112	-1.316
Psychological Health	550.3	56.3	550	549.9	-.143	-.240

It can be seen that the mean, mode and median of the psychological health score for the general sample are very close together, and kurtosis and skewness approach zero. This suggests a normal distribution with proportions approximating a bell-shaped curve. In order to examine more closely the normality of the distribution of the scale scores for the general sample, Cramer's method (1946, p. 366) for testing asymptotic properties of sampling distributions was applied to the above values of skewness and kurtosis (n/6 x [skewness]2 + n/24 x [kurtosis]2). Table 4.7 lists the resultant qui square values after Cramer's formula was applied (a qui square value equal to or less than 5.991 indicates normality of distribution at the .05 level of accuracy for this sample size).

TABLE 4.7

QUI SQUARE VALUES INDICATING NORMALITY OF DISTRIBUTION FOR THE INVENTORY SCALE SCORES AFTER APPLICATION OF CRAMER'S FORMULA TO SKEWNESS AND KURTOSIS (VALUES EQUAL TO OR LESS THAN 5.991 INDICATE NORMALITY AT THE .05 LEVEL OF ACCURACY FOR AN N OF 300)

SCALE	QUI SQUARE VALUES
Faking Good	26.675
Faking Bad	38.727
Self Regard	4.150
Interpersonal Rel.	24.986
Social Responsib.	58.855
Independence	2.503
Flexibility	0.139
Problem-solving	0.706
Assertiveness	2.707
Reality Testing	3.574
Stress Tolerance	3.051
Self-actualization	6.679
Happiness	207.650
Psychological Health	3.136

It can be seen that the Psychological Health Scale score is normally distributed for this sample; and most of the personality scale scores are also normally distributed with the exception of Interpersonal

Relationship, Social Responsibility, Self-actualization and Happiness.

Table 4.6 indicates that the scale scores have similar degrees of variance with the the majority of cases clustering to the right of the mid point of each scale (i.e., indicative of a fairly healthy, first year university population); this is most noticeable in the Happiness, Self-actualization and Problem-solving Scales. The Faking Bad Scale has the lowest degree of variance, the highest mean score and is skewed very much to the right of the mid point. This configuration allows latitude for movement to the left of the mean which is a good quality for a scale that is designed to indicate this form of test sabotaging. The Faking Good Scale has the lowest mean score value with the majority of scores "stacked" very much to the left of the mid point; this allows for ample potential "swing" to the right indicative of faking good tendencies making it a potentially good sabotage detection scale as well. Although it is generally advisable to avoid items and scales with extreme means, it is a desirable attribute of sabotage detection scales (Coulter, 1973, p. 23).

Gender and age differences: Table 4.8 below compares the mean scale scores between the general sample with those of the male, female, younger and older subjects in this sample (including all possible combinations of gender and age). Younger subjects were defined as those whose age was equal to or less than the average age of the general sample (i.e., 20 years and one month), whilst older subjects were defined as those whose age was greater than the average age of this sample; the mean age for the younger subjects was 19 years with a standard deviation of 0.7, while the mean age for the older subjects was 23 years and six months with a standard deviation of 4.7.

TABLE 4.8

MEAN INVENTORY SCALE VALUES FOR THE GENERAL SAMPLE
BROKEN DOWN BY SEX AND AGE

SCALE	GEN. SAMP.	MALE Ss	FEMALE Ss	YOUNG Ss	OLDER Ss	YOUNG MALE	YOUNG FEM.	OLDER MALE	OLDER FEM.
Faking Good ----	34.8	34.5	35.1	34.5	35.5	34.9	34.4	35.1	34.7
Faking Bad -----	61.7	61.5	61.8	61.2	62.7	61.9	61.4	62.0	61.6
Self Regard ----	48.6	50.5	47.0	48.7	48.5	51.6	46.4	49.2	46.1
Interpers. Rel.	49.9	47.8	51.7	49.8	50.0	48.0	51.0	46.4	52.7
Soc. Responsib.	49.7	48.4	50.9	49.3	50.9	48.4	51.1	48.9	53.4
Independence ---	50.1	51.2	49.1	49.7	51.2	49.8	48.4	52.5	48.4
Flexibility ----	44.8	44.2	45.3	44.3	45.9	42.5	43.7	45.5	45.4
Problem-solving	53.8	54.0	53.7	53.8	53.9	53.4	53.5	54.8	52.9
Assertiveness --	47.5	48.8	46.3	47.1	48.5	47.8	45.2	48.9	45.0
Reality Testing	48.1	48.6	47.8	47.5	49.7	47.2	47.0	50.7	49.1
Stress Tolerance	48.5	50.7	46.5	48.3	49.0	49.8	46.5	51.3	44.8
Self-actual. ---	53.9	53.3	54.3	54.4	52.5	54.1	54.1	51.8	52.3
Happiness ------	54.7	53.7	55.6	54.9	54.2	54.3	55.9	52.7	54.3
Psych. Health --	550	552	549	548	557	547	543	553	544
No. of Subjects	300	141	159	215	85	101	114	40	45

A multivariate analysis of variance was run to examine the degree of gender/age interaction. A two-tailed analysis of the results was applied in that there was no preconception as to the outcome (Hays, 1973, pp. 369-370; Siegel, 1956, p. 13). The results are presented in Table 4.9 in the form of levels of significance for F-values (sex/age interactions) and t-values (differences between all combinations of sex and age); t-values for the levels of significant differences are found in Appendix N.

TABLE 4.9

A MULTIVARIATE ANALYSIS OF VARIANCE OF SEX/AGE INTERACTION (SIG. OF F-VALUE) AND DIFFERENCES (SIG. OF t-VALUE) FOR EACH INVENTORY SCALE

SCALE	SEX/AGE INTERACT	SEX DIFF	AGE DIFF	YM/OM	YF/OF	YM/YF	OM/OF	YM/OF	YF/OM
Self Regard	.00	.00	.31	.48	.10	.00	.18	.00	.13
Inter. Rel.	.00	.00	.95	.01	.01	.00	.00	.00	.01
Soc. Res.	.00	.00	.16	.12	.01	.00	.01	.00	.13
Independ.	.06	.02	.27	.02	.24	.02	.03	.44	.01
Flexibility	.25	.67	.06	.30	.37	.67	.85	.11	.28
Prob.-solv.	.75	.43	.69	.27	.52	.43	.30	.80	.34
Assertive.	.07	.01	.73	.08	.19	.01	.07	.18	.02
Real. Test.	.03	.38	.01	.02	.54	.38	.26	.23	.00
Stress Tol.	.00	.00	.94	.00	.01	.00	.00	.01	.00
Self-act.	.41	.85	.10	.28	.54	.85	.72	.28	.15
Happiness	.26	.21	.20	.18	.99	.21	.39	.98	.12
Psy. Health	.73	.53	.39	.31	.91	.53	.48	.87	.28

YM=young males; OM=older males; YF=young females; OF=older females

It is revealed that there are definite significant gender/age interactions with respect to five factors (i.e., self regard, interpersonal relationship, social responsibility, reality testing and stress tolerance); and two factors approach significant interactions of this nature (i.e., independence and assertiveness). There is no significant gender/age interaction for the Psychological Health Scale which was expected. These significant interactions are most likely due to sociocultural and not biological differences; however, this can be determined only after results are carefully analysed from extensive and intensive cross-cultural studies on various age groups for both sexes. Tables 4.8 and 4.9 indicate that, for this specific sample, males have higher self regard, are more independent, are more assertive and can cope better with stress than females; however, female subjects exhibit better interpersonal relationship and are more socially responsible than their male counterparts. Older subjects demonstrate better reality testing than younger ones. Younger males have better self regard than younger and

older females. Females have consistently better interpersonal relationship than males in and between both age groups; older females have better interpersonal relationship than younger females, but older males demonstrate poorer interpersonal relationship than younger ones. Females are more socially responsible than males in both age groups; older females are more socially responsible than younger males and females. Males are more independent than females in both age groups; older males are more independent than younger females and males. Younger females are less assertive than younger males and older females. Older males exhibit better reality testing than both younger males and younger females. Males can cope better with stress than females in and between both age groups; while younger females can cope better than older females, older males are better copers than younger males.

Based on the significant difference between the "older" and "younger" subjects on one of the personality factors (reality testing), it is reasonable to assume that there may be additional and perhaps more dramatic differences between much older and much younger individuals. This would suggest the existence of a developmental factor in the personality structure of psychological well-being. A definition of psychological health would, thus, have to present different optimal levels for the personality factors involved for various age groups. Future research should then examine wider age groups; this would also afford an interesting way of studying how various components of psychological well-being change from childhood to old age.

Inter-correlations between the scales: The inventory scales were examined for the degree of inter-correlations between them. This was done

primarily in order to examine (1) the degree of correlation between the Psychological Health Scale and the personality scales in an effort to obtain an indication of the strongest and weakest correlates of overall psychological well-being, (2) the level of correlation between the Faking Good Scale and the other inventory scales in order to assess the level of social desirability response bias (i.e., the tendency to respond to a particular scale in a socially desirable manner), and (3) the inter-correlation between the personality scales themselves. Each scale was compared with every other scale in the inventory, the results of which are revealed in Table 4.10.

TABLE 4.10

INTER-SCALE CORRELATIONS ON THE EXPERIMENTAL INVENTORY (N=300)

	PH	FG	FB	SR	IPR	R	I	F	P-S	A	RT	ST	S-A	H
PH	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FG	.12	-	-	-	-	-	-	-	-	-	-	-	-	-
FB	.53	.16	-	-	-	-	-	-	-	-	-	-	-	-
SR	.70	.11	.35	-	-	-	-	-	-	-	-	-	-	-
IPR	.63	.16	.29	.36	-	-	-	-	-	-	-	-	-	-
R	.61	.34	.33	.31	.45	-	-	-	-	-	-	-	-	-
I	.58	-.27	.22	.36	.14	.08	-	-	-	-	-	-	-	-
F	.36	-.25	.09	.07	.18	.08	.30	-	-	-	-	-	-	-
P-S	.71	.03	.32	.37	.39	.42	.51	.12	-	-	-	-	-	-
A	.64	-.08	.37	.51	.41	.26	.59	.25	.40	-	-	-	-	-
RT	.65	.27	.58	.35	.19	.45	.40	.07	.52	.38	-	-	-	-
ST	.69	-.01	.29	.53	.20	.20	.52	.18	.56	.49	.52	-	-	-
S-A	.75	.02	.37	.52	.50	.47	.44	.11	.67	.46	.44	.43	-	-
H	.65	.18	.42	.54	.57	.46	.13	.13	.32	.29	.34	.33	.54	-

PH=Psychological Health, FG=Faking Good, FB=Faking Bad, SR=Self Regard, IPR=Interpersonal Relationship, R=Social Responsibility, I=Independence, F=Flexibility, P-S=Problem-solving, A=Assertiveness, RT=Reality Testing, ST=Stress Tolerance, S-A=Self-actualization, H=Happiness

The results suggest that the vast majority of personality scales (factors) exhibit a fairly high correlation with the Psychological Health Scale--i.e., the average correlation is .63. In spite of the fact

that these correlations are "inflated" or artificially high (i.e., the Psychological Health Scale is a composite scale composed of all of the personality scales including the scale correlated with it), they are presented in order to receive a general indication of the strongest and weakest correlates of the overall concept. The scale with the highest degree of correlation is Self-actualization, and the one which demonstrated the lowest correlation is Flexibility.

Table 4.10 reveals that the two highest correlating scales with the Faking Good Scale are Social Responsibility and Reality Testing; this may indicate that both factors are socially desirable (apparently it is not socially desirable to be either "bad" or "mad") and that they tend to measure more than what they were designed to measure (i.e., the degree of true variance is contaminated by social desirability response bias). This may be considered a retrospective examination of the inventory scales with respect to the nature of the underlying factors being studied from the aspect of social desirability. Jackson (1974, p. 23) points out that "the relative independence of scales from a common desirability factor and from each other is an important property of scores in a multi-trait personality inventory as it fosters the opportunities for obtaining discriminant validity" (i.e., it indicates that a scale is contributing unique information). With this in mind, it is interesting to point out that the "average absolute correlation" (i.e., when signs are ignored) for the personality scales with the Faking Good Scale is .16; this compares quite well with the average absolute correlation of the Personality Research Form scales with that inventory's Desirability Scale (i.e., social desirability) which is .24 (Jackson, 1974, p. 30). This indicates that the general degree of social desirability response bias for the inventory as a whole is relatively low; and the lower this is the greater

is the probability that the inventory is measuring what it is intended to measure (i.e., its true variance is less contaminated with this type of response bias).

The overall inter-correlation of the personality scales is .36; this suggests some degree of overlap between factors which was expected because of the complexity of psychological well-being. This compares favourably with the POI which has an average inter-scale correlation of .35 (Shostrom, 1974, p. 20). Factor inter-correlation is also a function of item overlap (item similarity) between factors; this partly explains the high inter-correlations between the problem-solving, reality testing and stress tolerance factors. Although a lower degree of inter-correlation could have been achieved by more clearly defining factorial boundaries, this would be more of an exercise in test construction than a meaningful study of the concept of psychological well-being. Flexibility has the lowest degree of inter-correlations with the other factors while self-actualization has the highest; this says something about the general extent to which these factors are related to (or interrelated with) the overall concept.

Lastly, it is interesting to note that the Faking Bad Scale correlates moderately high with the Psychological Health Scale. This is understandable in that the faking bad items represent an exaggerated ("negative") form of psychological health (i.e., psychopathology) in order to detect malingering. While a low score on the Faking Bad Scale suggests that one is faking bad, a high score indicates that one is not responding in a "pathological" manner as was previously stated, and a high score on the Psychological Health Scale indicates non-pathological responding as well (i.e., they are positively correlated). As such, this moderately high positive correlation between the two scales is one way of

confirming the validity of the Psychological Health Scale.

(2) Descriptive statistics related to performance on the concomitantly administered psychological tests: The results obtained from the three psychological tests (i.e., the 16PF, POI and SCL-90) which were administered with the experimental inventory are presented in Appendix O.

4.3.2 Interviewing

This section discusses the reasons for, the method of and results obtained from interviewing 39 individuals who completed the experimental inventory.

In the assessment of personality variables, one cannot rely entirely on information received from inventories. Other sources of input like interviews, other-observer evaluations and self-assessments are needed to assess information provided by inventories; Anastasi (1982, p. 608) states that "this is especially true in the domain of personality and the evaluation of psychological well-being." Thus, the primary aim of interviewing was to obtain other-observer ratings and self-assessments of the 11 personality factors being studied and an estimate of the general degree of psychological well-being for these respondents. This would later be used in examining the convergent criterion-related validity of the inventory and concept as an important part of the overall research strategy (subsection 4.2.2.3). Ratings are used extensively in obtaining criterion data for test validation (Anastasi, 1982, pp. 610-611); Jackson (1974, p. 23) points out that "the most direct and convincing way of demonstrating validity for a set of personality scale scores is to relate them to ratings made by judges." Furthermore, this was expected to provide additional experiential information related to the personality

characteristics being studied and to the overall degree and nature of psychological well-being; it was also expected that feedback would be gained related to various aspects of the experimental inventory itself (e.g., length, language, clarity and so forth).

4.3.2.1 Subjects (the interviewees): As the booklets were being returned, those respondents who agreed to be interviewed were identified. This process rendered 52 potential interviewees who were all white English-speaking South Africans enrolled in their first year of undergraduate studies. The representation by faculty was as follows: twenty students from the Faculty of Arts (39 %), eleven from the Faculty of Social Science (21 %), seven from the Faculty of Commerce (14 %), six from the Faculty of Science (12 %), three from the Faculty of Pharmacy (6 %), three from the Faculty of Education (6 %), and two students from the Faculty of Divinity (4 %).

An invitation in letter form (Appendix P) was then sent to each individual together with an additional booklet containing only the experimental inventory. They were informed of the time and place of the interview and that it would last approximately half an hour. They were requested to complete the enclosed inventory and post it back to the writer upon completion or to bring it with them at the time of their interview. By requesting these people to complete the inventory a second time, it was hoped to recruit a one-month retest sample in addition to interviewees.

Thirty-nine people were interviewed--20 males and 19 females; the average age was 20 years and two months with a standard deviation of 2.9 years (19.9 years with a standard deviation of 2.1 for males and 20.5

years with a standard deviation of 3.6 for females). In light of the volunteer nature of agreeing to be interviewed, one is unable to know how representative the interviewees were of the rest of the subjects who completed the inventory but who did not volunteer to be interviewed--e.g., were they more motivated, more verbal, more intelligent, more curious, more healthy or less healthy? Jackson (1974, p. 15) suggests that volunteers do tend to be more motivated, verbal, and cooperative. The specific influence (if any) of these and other factors concerning volunteers needs to be explored in future research.

4.3.2.2 Method (the interview): The interviews were conducted by the writer in his office in the Psychology Department at Rhodes University. The interviewer did not have any knowledge of the interviewees' scale scores on the experimental inventory or on the other concomitantly administered tests prior to or during the interview; this would have influenced his assessment and run the risk of reducing objectivity.

They were briefly told about the purpose of the interview and what would be demanded of them. In each case, the interviewer asked permission to record the interview on audio-tape; there were no refusals.

The first part of the interview comprised eleven statements that were read one at a time to the interviewee. These statements were drawn from what were considered to be the best items in each of the 11 personality scales; these were items which generally correlated the highest with the scale score in each of the scales and were also thought to convey the conceptual essence of those factors. The interviewees were asked to respond to items in such a way that would indicate how the statements related to them, what they personally mean and to what extent

they apply to them. The statements were used as "lead questions" designed to encourage them to talk about the various personality characteristics in such a way that they could be rated on a 7-point scale on each of them. A ranked value of "1" indicated an extremely low rating of the personality characteristic being assessed whilst a value of "7" indicated an extremely high degree of that characteristic. For example, a rating of "2" on the self regard factor indicates that the interviewee was thought to have very poor self regard while "6" conveys that the individual was perceived as possessing very high self regard. This part of the interview was designed to lend itself to other-observer ratings of the personality factors involved and the overall degree of psychological health. Future research in this area should consider additional ways of encouraging interviewees to talk about themselves in addition to using key items as "openers" (e.g., life histories, important life events related to the personality areas being studied, etc.).

In the second part of the interview, they were simply and directly asked to rate themselves on each of these personality characteristics using this 7-point scale. For example, they were asked: "If extremely dependent would be '1' and extremely independent would be '7' with '4' being somewhere in the middle, how would you rate yourself?" This provided the writer with self-assessment ratings on each of the factors.

They were then asked if they had ever felt a need for receiving psychological or psychiatric help and to respond in the following manner: never, very seldom, seldom, sometimes, often, very often, always. Responses to this question would serve as an additional external criterion for psychological health (subsection 4.2.2.3). Future

research should consider additional questions related to not only average and below average psychological health but to above average psychological well-being as well.

Two estimates of the interviewee's overall degree of psychological well-being were made based on the first part of the interview. The first estimate was a simple categorization into (a) below average, (b) average or (c) above average psychological health. The second estimate was based on a scale from 1 to 7 where 1 and 2 indicated very poor psychological well-being, 6 and 7 the opposite, and 4 representing average psychological health. An additional estimate of psychological health was later computed by summing the other-observer ratings on each scale and dividing by 11.

Towards the end of the interview, the interviewee was asked to rate his or her psychological health on the same 7-point scale. An additional estimate of self-assessed psychological health was calculated by summing the self-assessments and dividing by 11.

Following the self-assessment part of the interview, they were asked to frankly voice any comments that they might have about the research, things that were raised during the interview or anything else related to the inventory or the other concomitantly administered tests.

The type of interview that was conducted is what Anastasi (1982, pp. 610-611) refers to as "patterned" or "guided" which is designed to cover certain predetermined areas; this approach lies somewhere between the structured and the non-directive interview.

Two additional judges (or other-observers) were recruited bringing the number of other-observers to three including the writer.

Two of the psychologists who were earlier requested to generate

items (subsection 3.2.1) agreed to act as judges. Their earlier involvement with item generation had familiarized them with the basic definitions and criteria for psychological well-being used in the present study. This familiarity with the definitions and the instructions they received was thought to satisfy the training requirements that various researchers have stressed as an important factor for increasing the acuity of ratings (Anastasi, 1982, p. 612)--i.e., it has been demonstrated that such factors increase the reliability and validity of ratings and reduce common judgement errors (Bernardin & Pence, 1980; Borman, 1979; Ivancevich, 1979; Landy & Farr, 1980). They were given a list of the definitions and a copy of the tapes. They were both given forms (Appendix Q) to complete on each interviewee and instructions on how to register their assessments. They received no information whatsoever about the interviewees which would influence their ratings (e.g., test scores on the inventories, the writer's ratings, or background information); they were also asked not to discuss the way in which they assessed the interviewees between themselves.

The judges were requested to list the case number which preceded the beginning of each recorded interview. Based on the recordings, they were to record in the appropriate place on the forms provided their rating of each of the 11 personality characteristics (or factors) and the overall degree of psychological well-being using the above mentioned methods.

The form designed to register the other-observer ratings is found in Appendix Q and the form used to record self-assessments is found in Appendix R.

Future research should weigh the possibility of video-taping interviews and circulating them to a larger number of male and female

other-observers from various professional groups (e.g., clinical psychologists, psychiatrists, social workers, personologists and students of developmental psychology). This would definitely constitute a very sound and rigorous method of examining and establishing criterion-related concurrent validity.

4.3.2.3 Results: The average interview took approximately 40 minutes, the shortest was 25 minutes and the longest was a little over one hour.

All of the 39 interviews stored on magnetic audio-tapes (26 recorded hours) are in the possession of the writer. Three transcribed protocols appear in Appendix S which exemplify average, above average and below average psychological health as assessed by the other-observers; in order to observe the ratings assigned to these three interviewees (together with the other 36), the reader is referred to Appendix T.

Table 4.11 compares the interviewees' mean scores on the experimental inventory scales with their averaged self-assessments and the other-observer ratings for the 11 personality factors and the overall estimate of psychological health. These results will be studied in order to estimate the degree of "ease" (or difficulty) encountered in assessing these personality factors and way of defining psychological well-being. This will indicate the way in which individuals assess themselves and how well others are able to assess these factors using the operational definitions which were developed. This is one approach which is applied to evaluating the extent to which the concept has been operationally defined. The figures for the personality scales in the first column were created by dividing the scale scores by 10 (i.e., the number of items per

scale) in order to make them optically comparable with the averaged self-assessments, other-observer ratings (O-01, O-02 and O-03) and the average of the other-observer ratings (AO-O) in the next five columns. The first estimate of psychological health, which appears in each of the six columns, is a mean value and was created by (a) summing the responses for all of the personality items and dividing by the number of those items (110) for the experimental inventory column, (b) summing the self-assessments of all of the personality factors and dividing by 11 for the self-assessment column, or (c) summing the other-observer ratings and dividing by 11 for the three other-observers in the last four columns. The second estimate of psychological health appears in the last five columns and was created by (a) averaging the interviewees' self-assessments of their own psychological health on the previously mentioned 7-point rating scale (i.e., the self-assessment column) or by (b) averaging the other-observers' ratings of the interviewees' degree of psychological well-being on the 7-point scale which appears in the last four columns. The third estimate of psychological well-being was created by averaging the other-observers' categorization of the interviewees' psychological health into below average psychological health (1), average psychological health (2) or above average psychological health (3); these mean estimates appear in the last four columns.

TABLE 4.11

MEAN INVENTORY SCALE SCORES, SELF-ASSESSMENTS AND OBSERVER RATINGS (N=39

SCALE	INVENTORY	SELF-ASSESS.	OTHER-OBSERVER RATINGS 0-01	0-02	0-03	AVE. 0-0
Self Regard -------	4.9	4.8	4.6	4.3	4.3	4.4
Interpersonal Rel.	5.0	5.1	4.6	4.4	4.2	4.4
Soc. Responsibility	5.1	5.3	4.9	4.5	4.2	4.5
Independence ------	5.1	5.1	4.7	4.4	4.2	4.4
Flexibility -------	4.5	5.5	5.1	4.7	4.5	4.8
Problem-solving ---	5.5	4.9	4.6	4.6	4.3	4.5
Assertiveness -----	4.7	4.9	4.7	4.3	4.2	4.4
Reality Testing ---	4.9	5.1	4.7	4.6	4.4	4.6
Stress Tolerance --	4.9	4.7	4.4	4.0	3.8	4.1
Self-actualization	5.5	5.0	4.9	4.5	4.3	4.6
Happiness ---------	5.5	5.6	4.8	4.6	4.2	4.5
Psych. Health 1 ---	5.1	5.1	4.7	4.5	4.2	4.5
Psych. Health 2 ---	-	5.4	4.4	4.1	4.1	4.2
Psych. Health 3 ---	-	-	2.1	2.0	2.1	2.1

0-01=1st other-observ./0-02=2nd other-observ./0-03=3rd other-observ..

The general trend revealed in Table 4.11 is that the interviewees assess themselves verbally very much the way they expressed themselves when completing the inventory.

The closest estimate of overall psychological health was based on the first other-observer's ratings who was the only one who had the advantage of interviewing the subjects. On all the areas which were assessed by the three other-observers, the ratings of the first (0-01) more closely resembled the interviewees' self-assessments during the interview as well as their performance on the experimental inventory. This added advantage of personally interviewing the subjects increases the accuracy of assessment.

There is a general downgrading of the personality factors and general psychological health by other-observers in contrast to the self-assessments; or the opposite might be the case (i.e., the subjects tend to upgrade themselves on all of these areas) which could be indicative of

responding which is partially dictated by social desirability.

A test of inter-judge reliability between the three observers was carried out. Inter-judge (or scorer) reliability indicates the degree of error variance due to the difference in judgment between examiners (Anastasi, 1982, p. 117). It is generally found by having a sample of the subjects' behaviour independently judged by other-observers; the results which are obtained are then correlated with each other (Anastasi, 1982, p. 118). This was carried out in order to assess the feasibility of pooling (averaging) the assessments made by the other-observers as external criteria to be employed in validating the inventory (subsection 4.2.2.3.); this would be justified if the resultant inter-judge coefficients proved to be satisfactory. An additional reason for examining inter-judge reliability was to roughly assess the degree of agreement and ease encountered in applying the proposed definition of psychological well-being in an interview setting (i.e., a test of its "operationality"). The other-observers' ratings were compared on every personality factor and on the three measures of psychological health (which were described in the previous table). The Pearson r was employed to make these computations. The results are listed in Table 4.12 and will be discussed in subsections 4.5.3.1 and 5.2.2.

TABLE 4.12

INTER-JUDGE RELIABILITY BETWEEN THE THREE OTHER-OBSERVERS' RATINGS OF THE INTERVIEWEES (N=39)

SCALE	BETWEEN O-01 & O-02	BETWEEN O-01 & O-03	BETWEEN O-02 & O-03	AVE. CORR.
Self Regard	.76	.63	.68	.69
Interpers. Rel.	.65	.57	.62	.61
Social Responsib.	.43	.58	.70	.57
Independence	.74	.65	.80	.73
Flexibility	.34	.31	.56	.40
Problem-solving	.70	.74	.65	.70
Assertiveness	.82	.88	.86	.85
Reality Testing	.75	.75	.78	.76
Stress Tolerance	.82	.84	.82	.83
Self-actual.	.52	.53	.78	.61
Happiness	.63	.60	.64	.62
Psych. Health 1	.84	.70	.79	.78
Psych. Health 2	.56	.61	.79	.65
Psych. Health 3	.69	.69	.88	.75
Average corr.	.66	.65	.74	.68

O-01=1st oth.-observ./O-02=2nd oth.-observ./O-03=3rd oth.-observ.

The average inter-judge reliability is .68 which is high and indicates satisfactory agreement between the other-observers in respect to the way in which they assessed the interviewees. The personality factors which exhibited the highest degree of inter-judge reliability are assertiveness (.85), stress tolerance (.83) and reality testing (.76). This suggests that these factors are easily assessed in an interview setting independently by the three different other-observers, based on the way it was defined in the present study. However, the lowest (scorer) coefficient was obtained for flexibility (.40); possibly because of the way it was defined, these particular observers found it difficult to assess and/or it is simply a difficult factor to assess. Flexibility's relatively low inter-judge reliability casts some degree of doubt on pooling other-observers' ratings of this factor as an external criterion

to examine convergent criterion-related validity in the present study. In light of the fact that it did demonstrate fairly good construct validity (to be discussed in subsection 4.5.2.5), it most likely means that it is simply a difficult factor to assess in others; it is apparently a difficult personality factor to assess in oneself (Table 4.17) as well.

The highest degree of inter-judge correlation demonstrated on the measures of overall psychological health was on the first one (.78). This supports the advantage of not merely assessing psychological well-being in general but breaking assessment down into its important and essential sub-components. More succinctly, it is not sufficient to say that one has good, poor or average psychological health but to assess the degree of psychological well-being in various key areas.

Out of the 39 subjects who were interviewed, 22 (56.4 %) subjects stated that they never felt a need for seeking professional help for emotional problems, seven (17.9 %) very seldom, three (7.7 %) seldom, five (12.8 %) sometimes, one (2.6 %) often and one (2.6 %) very often.

4.3.3 Retesting the experimental inventory

As was previously stated (subsection 4.2.3.2), retesting the experimental inventory provides an important method of examining its (stability) reliability. This was a way of evaluating how these factors hold up over time. The reasons for retesting a one- and four-month sample were justified in subsection 4.2.3.2; the method and results are presented below.

4.3.3.1 Retesting the experimental inventory after one month:

(1) Subjects: The subject pool for the one month retest sample was taken from those respondents who indicated that they would be willing to be interviewed (subsection 4.3.2.1). Those who were willing to be interviewed, indicated this in the booklet and submitted their name and address. This then yielded both prospective interviewees and one month retest subjects as was previously stated in subsection 4.3.2.1; thus, the selection procedure was identical for both samples. The second completion of the inventory was done approximately at the time of the interviewing or about one month after the initial completion of the inventory. The population description of the prospective one month retest group is essentially the same as that of the interview sample (subsection 4.3.2.1). Of the 52 prospective one month retest subjects who were asked to complete the inventory a second time, 44 (85 %) complied. The one month subjects numbered 44; this was broken down into 24 males (54.5 %) and 20 females (44.5 %). Their average age was 19 years and ten months with a standard deviation of two years (20.3 years with a standard deviation of 2.5 for males and 19.3 with a standard deviation of 1.1 for females).

(2) Method: The one-month retest subjects were asked to post the second completed inventory to the writer prior to their scheduled interviews or to bring it with them to the interviews as was previously stated (subsection 4.3.2.1). All of those who were interviewed (39) completed the inventory for the second time; and five additional inventories were received in the post from respondents who failed to show

up for their scheduled interview. The one-month group was tested and retested after arriving at campus on the identical form of the inventory (i.e., the 130-item revised inventory).

4.3.3.2 Retesting the experimental inventory after four months:

(1) Subjects: The four month interval subjects were selected by identifying all those respondents who indicated in the booklet that they had participated in the earlier pilot study (subsection 3.7.6.3), which was approximately four months prior to the onset of the experimental phase of the research. During the experimental phase, 27 respondents indicated that they had previously participated in the research; this group formed the four month retest sample. This sample was broken down to 13 males (48 %) and 14 females (52 %). The average age of this second retest sample was 21 years and six months with a standard deviation of 3.2 years (20.4 years with standard deviation of 0.7 years for males and 22.6 with a standard deviation of 4.3 for females).

(2) Method: The retesting of the four-month interval subjects was done after they arrived at university, while they were initially tested before leaving home. The four-month group was first tested on the original 240-item pilot study version of the inventory and then retested on the revised 130-item experimental version (retest reliability would be examined by testing the degree of correlation between the revised experimental inventory items and the same 130 items in the piloted version).

4.3.3.3 Results: Table 4.13 reveals the stability coefficients for the two retest samples (based on Pearson r). These results will be discussed in subsection 4.6.2.

TABLE 4.13

STABILITY COEFFICIENTS FOR THE ONE-MONTH (N=44) AND THE FOUR-MONTH (N=27) RETEST SAMPLES

SCALE	1-MONTH SAMPLE	4-MONTH SAMPLE
Self Regard -------	.92	.76
Interpersonal Rel.	.87	.77
Soc. Responsibility	.78	.75
Independence ------	.86	.72
Flexibility -------	.82	.82
Problem-solving ---	.87	.80
Assertiveness -----	.83	.69
Reality Testing ---	.82	.61
Stress Tolerance --	.79	.55
Self-actualization	.88	.80
Happiness ---------	.86	.77
Psychological Health	.90	.90
Average stab. coeff.	.85	.75

4.3.4 The testing of a clinical sample

The next important step of the experimental phase was the testing of a clinical sample. This has importance for the experimental inventory and, more importantly, for the examination of the *a priori* concept of psychological well-being. This subsection will focus on the rationale for including a clinical sample in the research design, the method of testing this sample and the results which were obtained.

The primary reason for testing a clinical sample is to expand the examination of the discriminant criterion-related validity of the *a priori* concept (subsection 4.2.2.3). It is expected that the clinical sample will exhibit greater deficiencies in most of the factors and a lower overall degree of psychological well-being than the the general sample.

Moreover, it is assumed that the more important or sensitive components of this concept will be those that demonstrate the greatest significant differences between these two samples.

4.3.4.1 Subjects (the clinical sample): Clinical subjects were drawn from the Psychology Clinic at Rhodes University and from an out-patient clinic attached to a Port Elizabeth psychiatric hospital. The prospective subject pool for the clinical sample was more heterogeneous than the general sample. While they were all white English-speaking South Africans, there was a wider age range. The socio-economic distribution was also more heterogeneous than the general sample. Although an enormous effort was made to recruit clinical subjects, only 22 individuals actually completed the experimental inventory. Of these 22 subjects, nine (41 %) were males and 13 (59 %) were females. The average age was 24 years and eight months with a standard deviation of 9.3 years (23 years with a standard deviation of 7.1 for males and 25.8 with a standard deviation of 10.7 for females). Six of the clinical subjects were not university students. It was decided to compare this group with a matched group (for age and gender) of 22 subjects from the general sample; the average age of the matched sample was 24 years and one month with a standard deviation of 7.5 (23.5 with a standard deviation of 7.8 for the nine males and 24.6 with a standard deviation of 7.6 for the 13 females).

In spite of the need to study larger samples as an important prerequisite for generalizing research findings, the initial exploration of conceptual possibilities on smaller groups of subjects is nevertheless justified; such approaches are intended to map out general areas which can later be explored more in depth by future researchers (Hays, 1973, p.

422).

4.3.4.2 Method: After receiving permission from the head of the clinic, the experimental inventories (Appendix K) were distributed to four graduate clinical psychology students doing their clinical practicum at the Psychology Clinic at Rhodes. The students were given a brief explanation of the research, the need to include a clinical sample, and instructions on how to approach the individuals they were seeing for assessment and therapy. They were told that if they could justify that participation in the research project would or could be damaging or anti-therapeutic, they were to refrain from asking the individual to complete the inventory. In all other cases, they were asked to tell the individual that the inventory represents part of a research project that is currently being conducted by a doctoral student in the Psychology Department, that their participation was purely voluntary and would be kept confidential, and that they were to complete it on their own time and to return it to the clinical psychology students. They were to read the cover letter, fill in the required personal information and study the instructions in the booklet before beginning to respond to the inventory.

Upon receiving permission from the superintendent of a large psychiatric hospital in Port Elizabeth, the senior clinical psychologist in charge of the clinical supervision of clinical psychology graduate students at the University of Port Elizabeth took responsibility for subject selection, test administration and collection of completed inventories. He received a verbal and written explanation of the research including the importance of testing clinical subjects and instructions (Appendix U). This information, in turn, was relayed to three clinical

psychology trainees who were to distribute and collect the inventories. The trainees were instructed that they were to be given to white English-speaking South Africans in their late teens and early twenties who had matriculated from high school.

4.3.4.3 Results:

Table 4.14 presents the inventory scale scores for the clinical sample and a matched group from the general sample and the level of significant difference between them (based on a one-tailed examination); the results will be discussed in subsection 4.5.4.2.

TABLE 4.14

MEANS, STANDARD DEVIATIONS AND LEVELS OF DIFFERENCE ON THE INVENTORY SCALES BETWEEN THE CLINICAL SAMPLE (N=22) AND A MATCHED GROUP FROM THE GENERAL SAMPLE (N=22)--D.F.=42

SCALE	GENERAL SAMPLE . MEAN	GENERAL SAMPLE . S.D.	CLINICAL SAMPLE. MEAN	CLINICAL SAMPLE. S.D.	t VALUE	t PROB.
Self Regard -----	48.6	6.8	43.2	11.6	1.9	.03
Interpersonal Rel.	51.0	9.6	47.5	8.8	1.2	.11
Social Responsib.	52.5	6.9	45.8	7.5	3.1	.00
Independence ----	51.1	7.9	47.6	9.5	1.3	.10
Flexibility -----	44.6	7.8	42.6	9.3	0.8	.22
Problem-solving -	54.1	6.8	51.6	8.9	1.1	.15
Assertiveness ---	49.8	6.9	44.1	9.5	2.3	.01
Reality Testing -	50.7	6.9	42.9	7.7	3.5	.00
Stress Tolerance	49.9	9.1	43.6	8.9	2.3	.01
Self-actualization	55.3	6.2	49.4	9.5	2.5	.01
Happiness -------	55.2	5.4	46.9	10.9	3.2	.00
Psych. Health ---	562.8	48.9	505.2	71.1	3.2	.00

4.4 THE EXAMINATION OF THE OVERALL FACTORIAL STRUCTURE OF THE CONCEPT

4.4.1 Item analysis

As was previously stated in subsection 4.2.1.1, the purpose of again employing item analysis was to confirm the earlier results of the pilot study with respect to the degree of internal consistency of the inventory scales. This will hopefully say something about not only the future usability of the inventory itself but about the nature of the internal structure of the personality factors.

4.4.1.1 Subjects: The item analysis procedure was applied to the responses of all those subjects who were included in the experimental phase of the study (N=322).

4.4.1.2 Method: The description of this statistical procedure was previously discussed in detail in subsections 3.7.4 and 4.2.1.1. The primary difference in the way in which it was employed at this stage was to run only one item analysis on the data rather than the six analyses which were previously conducted in the pilot study (subsection 3.7.4).

4.4.1.3 Results: In presenting the results below, the approach will be to proceed factor by factor listing the items under each of the conceptual components; the present item-scale coefficients are placed in parenthesis following each item (together with the previous ones). This will be followed by presenting the average item-scale coefficient and the present Cronbach alpha for the scale which will be compared with the previous alpha value. A brief discussion of the results will follow. Once again it should be pointed out that the results of item analysis are sensitive to item wording in addition to conceptual issues of the factors involved (subsection 3.7.5); therefore, the wording of the items is

pondered together with the interpretation of the results in more conceptual terms. It will be seen that the results of the present item analysis confirm those of the pilot study with the possible exception of the Social Responsibility and Flexibility Scales which need to be reconsidered before the inventory is employed in future research.

(1) Self regard:

(a) The ability to view oneself as basically good:

100. I think that I'm basically a good person (.56--previous=.45).

(b) The ability to respect oneself:

35. Deep down I dislike myself (.79--previous=.63).
113. I'm happy with the type of person I am (.80--previous=.62).

(c) The ability to accept oneself:

126. It's hard for me to accept myself just the way I am (.77--previous=.56).
9. Looking at both my good points and bad points, I feel good about myself (.75--previous=.69).
48. I'm happy with my physical appearance, with the way I look (.78--previous=.66).
74. I feel comfortable with my body (.74--previous=.62).

(d) To feel confident in one's ability to confront life and take control of one's life:

87. I believe that I have control over what happens in my life (.47--previous=.41).
61. Before I start an exam I find myself thinking I'm going to fail (.48--previous=.45).
22. If someone kept kicking or bumping my chair in a movie, I would ask him or her politely to stop (.31--previous=.56) --correlates higher on assertiveness.

The Cronbach alpha for self regard is .84 (the previous alpha was .85) whilst the average item-scale coefficient is .65. The strongest conceptual components appear to be the ability to respect oneself and the ability to accept oneself. The ability to view oneself as basically good is also a strong sub-component of this factor but possibly

secondary to the two previously mentioned ones. The weakest sub-component is the ability to feel confident with oneself. The weakest items appear to be item 22, item 61 and item 87. It is interesting to note that item 22 (the scale's weakest item) now correlates higher with the Assertiveness Scale where it was originally placed prior to the pilot study (subsection 3.5.7); such an item should be deleted. This "borderline" characteristic suggests a conceptual overlap regarding the self-confidence aspect in both factors. However, it is also important to consider the rather wordy nature of the item which could have affected its low correlation coefficient in general. On the other hand, the more concise wording of the other two items related to the self-confidence aspect (item 61 and item 87) and/or their more specific reference to self-confidence and taking control most likely accounts for their higher correlation coefficients.

(2) Interpersonal relationship:

(a) The ability to establish and maintain relationships:

16. I fail to make friendships easily (.67--previous=.64).
81. I'm able to introduce myself to strangers without great difficulty (.62--previous=.53).

(b) Mutually satisfying interpersonal relationships:

42. I feel that my social relationships are rewarding for both me and my friends alike (.73--previous=.68).
86. I make a conscious effort to work for good relations with and between others (.64--previous=.58).
3. I like entertaining and being entertained (.61--previous=.62).

(c) The ability to give and receive affection and intimacy:

55. I'm able to give and receive warmth and affection (.69--previous=.63).
107. My friends can tell me intimate things about themselves (.44--previous=.51).
29. It's hard for me to tell someone that I like him or her a lot (.63--previous=.47).

94. I believe that expressing one's feelings is a sign of weakness (.52--previous=.54).
120. I keep my personal problems and troubles to myself (.50--previous=.48).

The Cronbach alpha for this scale is .80 (the previous alpha was .83) whilst the average item-scale coefficient is .61. It appears that all three conceptual components of this factor are fairly strong. In the third conceptual component, there are two items that stand out with higher correlation coefficients and three with lower ones. This "split" is understandable in that the two items with the higher coefficients (item 29 and item 55) are short, clearly worded and tend to grasp the essence of that particular aspect of interpersonal relationships; on the other hand, the three items with the lower coefficients (item 94, item 107 and item 120) appear less tangible and more "distant".

(3) Social responsibility:

(a) The ability to accept and respect fellow human beings:

6. It is difficult for me to accept others the way they are (.24--previous=.34).

(b) The ability to demonstrate social responsibility:

19. I'm seen as a person who plays a responsible role in most activities (.49--previous=.39).
123. I've been told that I don't have a strong sense of responsibility (.39--previous=.30).
110. If I could get away with breaking or bending the law in certain situations I would (.49--previous=.46).
45. I would stop and try to help a crying child find his or her parents even though it was important for me to be somewhere else at the time (.39--previous=.29).
58. I think that people who don't have children shouldn't pay taxes for education (.37--previous=.36).
32. I am convinced that no one has ever understood or will understand me (.54--previous=.47).

(c) To experience oneself as a cooperative, contributing and constructive member in one's social group:

84. I dislike doing errands and helping around the house (.61--previous=.44).

97. I have the feeling that I don't owe anyone anything in this world (.57--previous=.39).
71. I'm satisfied with and enjoy my family (.57--previous=.55).

The Cronbach alpha for the Social Responsibility Scale is .60 (the previous alpha was .69) and its average item-scale correlation coefficient is .47. The weakest conceptual component of this factor appears to be the ability to accept and respect others. This is somewhat difficult to evaluate because there was only one item (item 6) representing this part of the definition, which proved to be the weakest item in the scale. This item, and perhaps this conceptual component of the factor, should be deleted. However, it could be that this item was difficult to understand. The second conceptual part of this factor appears to have fared better, but the correlation coefficients are not that high (especially with respect to item 45, item 58 and item 123). It may be that responsibility was represented by a wide range of items that apparently do not hang together with the overall area (i.e., the scale and/or factor are too heterogeneous). The results of the last component of this factor suggest that these three items (item 71, item 84 and item 97) grasp the essence of the way in which it was defined.

(4) Independence:

(a) Self-directed and self-controlled in one's thinking:

37. When it comes to making decisions I prefer to rely on my own thinking rather than on advice from others (.62--previous=.38).
24. I would prefer others to make the important decisions for me in my life (.62--previous=.46).
89. I like to plan things on my own (.63--previous=.43).
115. If I were involved in a project with two other people, I would rely more on their ideas than they on mine (.57--previous=.49).

(b) Self-directed and self-controlled in one's action:

11. On the whole my actions and behaviour are determined by me (.50--previous=.32).

76. I prefer a job in which I am told pretty much what to do (.63--previous=.44).
102. I like to do things on my own, without outside help (.65--previous=.44).
50. I'm more of a follower than a leader (.64--previous=.45).

(c) Free of emotional dependence upon others:

63. I avoid clinging to others (.55--previous=.51).
128. I seem to need others more than they need me (.58--previous=.34).

The Cronbach alpha for independence was .80 (the previous alpha was .82) and the average item-scale correlation coefficient was .60. The above results indicate that the items of this scale hang together well and that all three components of this factor are fairly strong. In retrospect, the items tapping the cognitive (the first component) and the behavioural (the second component) aspects of independence are very similar which may have accounted for fairly similar levels of correlation with the scale score.

(5) Flexibility:

(a) The ability to adjust one's thinking and feeling to changing situations and conditions:

10. It's difficult for me to change my ideas when new experiences or fresh evidence suggest that I'm wrong (.45--previous=.43).
127. I think that there's only one real way of looking at most things in life (.55--previous=.44).
36. I believe that one's political thinking should change with the times and circumstances (.41--previous=.31).
75. My ideas about God and religion are unchangeable (.52--previous=.30).
62. I disapprove of the way people are experimenting with sex these days (.53--previous=.28).

(b) The ability to adjust one's behaviour to changing situations and conditions:

23. I find it difficult to make changes in my daily routine (.45--previous=.27).

49. I think that it would be difficult for me to make the necessary adjustments if I were forced to leave my home (.57--previous=.36).
114. It was (or is) difficult for me to leave home (.56--previous=.38).

(c) The ability to be open and tolerant to differences and ambiguities:

88. I can understand that one may love and hate the same person (.32--previous=.16).
101. I believe that men should act masculine and that women should act in a feminine way (.49--previous=.47).

The Cronbach alpha for this scale is .64 (the previous alpha was .67) while the average item-scale correlation coefficient is .49. The level of item-scale correlations is not high nor does the scale as a whole demonstrate good internal consistency relatively speaking. It appears that the first two components of this factor are the strongest (i.e., the ability to adjust one's thinking, feeling and behaviour to changing situations and conditions). The weakest component is the ability to be open and tolerant to differences and ambiguities; however, this could be related to the heterogeneous nature of this conceptual component as well as to the possible vagueness of item 88. The lowest correlating items (i.e., the weakest) are 10, 36, 23, 88 and 101.

(6) Problem-solving:

(a) Being aware of the problem and intending to deal with it:

92. I feel that it's possible to deal effectively with most problematic situations one meets (.49--previous=.51).
14. I believe that when facing a problem, the best thing to do is to stop and think rather than try the first solution that comes to hand (.62--previous=.58).
118. Normally I see change as a challenge and potentially important for further personal development (.56--previous=.47).

(b) Defining and formulating the problem clearly:

1. My general approach in overcoming obstacles is to move step by step (.62--previous=.54).

79. When faced with a puzzling situation, I like to collect all the information about it that I can (.72--previous=.51).

(c) Generating several solutions:

27. In handling situations which arise, I try to think of as many possible approaches as I can (.72--previous=.60).

(d) Deciding on one or the other of the considered solutions:

40. When trying to solve a problem, I look at both the pros and cons of each possible solution and then decide on the best course of action (.73--previous=.73).

(e) Implementing the selected solution through focused and relevant activity:

53. I believe that if you've decided to do something then you must go ahead and do it (.50--previous=.29).

(f) Evaluating the efficacy of the solution:

105. After attempting to deal with some difficulty in a particular way, I'm interested in seeing how my approach worked out (.56--previous=.47).
66. I believe that if at first you don't succeed it's important to try and try again new and different approaches (.64--previous=.64).

The Cronbach alpha for this scale is .82 (the previous alpha was .86) whilst the average item-scale correlation coefficient is .62. In spite of the fact that this scale is quite heterogeneous (because of the multi-phasic nature of the factor), the item-scale correlation coefficients are quite high. The second, third and fourth phases of problem-solving all possess high correlating items (with the scale score) which suggests that these phases are probably the most important and/or all these items are tapping the essence of these individual phases quite well. The first and last phases appear to be strong components of this factor though somewhat less than the three previously mentioned ones. The relatively weakest phase in problem-solving appears to be the fifth (i.e., implementing the selected solution); however, it has only one item (item 53) which is the weakest in the scale. This may be related to its dubious

success in capturing the essence of this phase (i.e., it may be a poor item); or, another possibility is that this phase is assumed in the whole process and is less important to single out as a separate phase. In respect to this last point, implementation rarely appears as a separate stage in the various concepts that deal with problem-solving. The relatively weakest items in this scale are 92, 118, 53 and 105.

(7) Assertiveness:

(a) The ability to stand up for personal rights:

44. I feel helpless when I have to stand up for my rights or express my feelings (.66--previous=.72).
18. I'm unable to tell people when they bother me (.62--previous=.61).

(b) The ability to express thoughts and beliefs:

109. I'm unable to express my ideas to others (.59--previous=.50).
5. When I disagree with a person I respect, I am able to speak up for my own viewpoint (.67--previous=.42).
57. If a heated discussion arose between two of my friends, it would be hard for me to take a definite stand with the one I think is right (.53--previous=.46).
70. I find it difficult to tell a domineering person that he or she is wrong (.64--previous=.73).

(c) The ability to express feelings:

83. When I'm cross with someone I can tell him or her about it (.60--previous=.53).
96. It's hard to accept the sexual feelings that surge up within me from time to time (.47--previous=.49).

(d) Feeling sure of oneself in relating with others and confronting various situations in life:

31. I feel sure of myself in most situations (.64--previous.57).
122. I feel confident when relating to others (.58--previous=.65)--correlates higher on interpersonal relationship.

The Cronbach alpha is .80 (the previous alpha was .81) and the average item-scale correlation coefficient is .60 for this scale. The

item-scale correlations are fairly high in all four of the conceptual components with minor exceptions. The part of the factor dealing with the ability to express feelings is the weakest (relatively speaking); very few types of feelings were depicted in its items. A number of subjects who were interviewed indicated a difference between the ability to stand up for personal rights and to express thoughts and beliefs on the one hand and the ability to express feelings on the other with the latter being more difficult for the vast majority; this point may then partially explain what has statistically happened here. The lowest correlating items are 57, 96 and 122. In light of the fact that items 5, 57 and 70 are very similar, item 57's lower item-scale correlation is probably a function of over-wordiness and syntactic clumsiness. Item 122's higher correlation with interpersonal relationship may reflect the specific social nature that was expressed in this item in comparison with the more general aspect of item 31. Before employing this inventory in future research, it would be advisable to retain the latter and discard the former item based on these results.

(8) Reality testing:

(a) When what is being experienced corresponds to what is there:

56. I have had peculiar and strange experiences that cannot be explained (.55--previous=.38).
17. When looking at a particular situation, I have difficulty in seeing what is more important and what is less important (.46--previous=.39).
69. I have had periods in which I felt, for no special reason, unusually cheerful or sad (.47--previous=.37).

(b) Testing the correspondence between what is experienced and what is actually there:

121. I try to see things as they really are, without fantasizing or daydreaming about them (.65--previous=.62).

4. I can easily pull out of daydreams and fantasies, and tune into the reality of the immediate situation (.62--previous=.62).
43. It's hard for me to be absolutely sure whether some things have really happened or whether I have dreamt it or just thought that they have happened (.61--previous=.58).
108. I avoid blowing things up out of proportion (.44--previous=.54).

(c) The degree of perceptual clarity evident when assessing and coping with a specific situation:

30. After thinking of a few possible ways of dealing with a problem, I'm the sort of person who finds it difficult to work out which of the ways is the best (.57--previous=.51).
82. When carrying out a decision and following through with a specific course of action, I find it hard to concentrate and to focus on what I'm doing (.50--previous=.41).
95. Normally I avoid examining the reasons for failing to solve a problem (.50--previous=.60).

The Cronbach alpha for reality testing is .72 (the previous alpha was .80) whilst the average item-scale correlation coefficient is .54. The strongest conceptual component of this factor appears to be the second (i.e., testing rather than assuming correspondence); this component does not only possess items which grasp the essence of what was meant to be conveyed, but it is felt that this is (in actuality) an essential conceptual underpinning in reality testing. The three weakest items are 17, 69 and 108. Two of these items (item 17 and item 69) appear in the first conceptual component (i.e., when what is being experienced corresponds to what is actually there); this may reflect an inherent difficulty in generating items which are able to adequately tap this specific aspect of reality testing.

(9) Stress tolerance:

(a) The ability to withstand adverse events and stressful situations without becoming immobilized, caving-in or exploding:

59. I can handle tension and stress without getting too nervous or falling apart (.71--previous=.59).

33. I tend to take difficult situations too seriously and become overwhelmed (.66--previous=.47).
72. When presented with difficulties, I get too tense to work properly (.68--previous=.56).

(b) Being able to choose various courses of action:

111. In tight situations I normally come up with a suitable course of action (.60--previous=.49).
7. I believe that I am resourceful and effective in dealing with upsetting problems (.65--previous=.52).
46. When certain situations upset me, I know how to deal with them and try to relax (.76--previous=.81).
124. I try to test out my ideas to see if that's the way things really are (.41--previous=.41)--correlates higher with problem-solving.

(c) Being optimistic about new experiences and about one's ability to overcome the problem at hand:

85. I believe in my ability to handle most of the upsetting problems I encounter (.72--previous=.64).
20. I can face the unpleasant realities of life when they occur from time to time (.63--previous=.48).

(d) Feeling that one can control or influence the stressful situation:

98. When faced with serious problems I get physically tense and fear that I'll lose control (.69--previous=.56).

The Cronbach alpha is .85 (the previous alpha was .89) while the average item-scale correlation coefficient is .65 for stress tolerance. The above results suggest that all four conceptual aspects of this factor were confirmed based upon the generally high level of item-scale correlation. The consistently high correlations between almost all of the items and the scale score are even more impressive when one notes the heterogeneous structure of this factor with its different and varied conceptual components. Item 124's higher correlation with problem-solving is understandable when one observes its specific wording that is more closely related to that factor; based on these results, this item could be deleted.

(10) Self-actualization:

(a) General self-actualization:

67. I feel that I'm growing and moving forward as a person (.66--previous=.52).
15. I feel that in the last few years I have just been marking time, stagnating (.59--previous=.45).

(b) Striving to actualize one's potential capacities:

119. I try to develop and expand those activities which I enjoy (.75--previous=.76).
28. If I was interested in photography I would try to learn as much as I could about it (.58--previous=.61).

(c) Involved in various interests and pursuits and being committed to purposes and goals:

106. I love my hobbies (.65--previous=.50).
93. I tend to neglect that which I'm interested in (.64--previous=.53).
41. I lack enthusiasm for my interests (.76--previous=.65).

(d) A life-long effort to enrich one's life:

54. I make a conscious effort to improve myself and enrich my life (.66--previous=.61).
80. I try to make my life as meaningful as I can (.76--previous=.70).
2. I get enjoyment from what I do (.62--previous=.64).

The Cronbach alpha for self-actualization is .85 (the previous alpha was .88) whilst the average item-scale correlation coefficient is .67 for this scale. It can be seen that all of the basic conceptual aspects of this factor demonstrate strength with respect to the way in which their items correlate with the scale score.

(11) Happiness:

(a) General happiness:

91. I am an unhappy person (.78--previous=.81).

(b) The ability to feel satisfied with and enjoy various aspects of one's life:

52. I enjoy myself and feel good in activities like work, companionship, play, faffing around and so forth (.71--previous=.63).
39. It's hard for me to enjoy life (.77--previous=.80).
26. I am satisfied with my lot (.48--previous=.53).
65. I'm discouraged about life (.73--previous=.55).

(c) The ability to play and have fun:

117. I like to have fun (.64--previous=.72).
78. I can let myself go and enjoy myself at a lively party (.60--previous=.62).
13. I enjoy weekends (.55--previous=.52).
104. It's hard for me to smile (.72--previous=.71).
130. It's easy for me to laugh (.74--previous=.74).

The Cronbach alpha for this factor is .86 (the previous alpha was .90) while the average item-scale correlation coefficient is .67. The results suggest a rather strong factor which is composed of strong conceptual components. Part of this is related to the high degree of homogeneity that can be observed in the factor's definition and in the items that were selected for it. The general item (item 91) has the highest correlation with the scale score (.78) suggesting that it has adequately grasped the essence of the factor as a whole and, hence, is a good general item; this item is very simple and straightforward which essentially asks the person to what extent he or she feels happy or unhappy most of the time in most situations. The relatively weak items in this scale appear to be items 26, 13 and 78. Item 26 demonstrated the lowest item-scale coefficient which could be due to its vagueness. On the other hand, item 13's relatively "low" coefficient (r=.55) may have been related to its exaggerated specificity.

4.4.2 Factor analysis

The primary purpose of employing factor analysis was to examine

the factorial structure of the a priori concept (subsection 4.2.1.2); this was a way of statistically checking if the eleven proposed factors (structurally "exist", after item analysis was employed to shorten and strengthen the scales which were developed to measure these factors (subsections 3.7.4 and 3.7.5).

4.4.2.1 Subjects: The responses to the inventory items of all those subjects included in the study (N=322) were factor analysed.

4.4.2.2 Procedure: In light of the fact that the employment of factor analysis is an important feature of the research strategy (subsection 4.2.1) representing one of the major bridges between the theoretical and empirical aspects of the present study (section 3.1), an in depth description of this procedure is presented below.

Factor analysis has made valuable contributions to personality theory and test construction (Anastasi, 1982, p. 14). It is especially useful in determining "the dimensionality of a domain" (Bohrnstedt, 1970, p. 96) and "the degree to which a given variable or several variables are part of a common underlying phenomenon" (Nie et al., 1975, p. 10). This procedure is viewed by Cattell (1952, pp. 14-17) as most useful at the earliest stage of research because "there is no point in working out--or rather hoping to work out--precise laws about the relations between variables until we have chosen the significant variables." Thus, according to Cattell, it is necessary first "to find what relatively independent functional unities are operative in the situation and then do experiments on them." This suggests that experimental examination

should follow a preliminary structuring of the field by factor analysis which is a radically different methodological approach from the more traditional experimental examinations of random variables. Cattell sees this procedure as "a kind of radar to avoid both the trivial and the unreal, for it gives us--however roughly at first--the shape of the real structure hidden in the swirling multiplicity of variables." Mulaik (1972) sees the usefulness of factor analysis as a confirmatory as well as an exploratory adjunct to research; he does, however, suggest (pp. xii-xiii) that "it has been more profitably used when the researcher knew what he was looking for" (i.e., hypothesis-testing or confirmation). Hence, factor analytic models can play an important role in the formulation of "structural" theories (Mulaik, 1972, pp. xii-xiii). It is an appropriate method for bridging the gap between theoretical concepts and empirical measures according to Zeller and Carmines (1980, p. 15); these empirical factors are presumed to correspond to specific theoretical concepts. After (empirical) factors have been identified, they can then be utilized in describing the factorial composition of a structural theory and/or test (Anastasi, 1982, pp. 145-146). Thus, it provides a technical answer to theoretical questions. Cattell expressed this point in 1952 (p. x) by saying that although personal intuition and sensitivity in psychology "are as valuable as ever, a mathematical sense of probabilities and degrees of interaction and evidence of functional unity has also become essential."

This statistical procedure can roughly be broken down into three major steps (Anastasi, 1982, pp. 145-146; Nie et al., 1975, pp. 469-473): (a) preparation of a correlation matrix by computing the correlations of

each item with every other item, (b) extraction of the initial factors from the correlation matrix which represents the first major exploration of possible data reduction, and (c) rotation to a terminal solution in the final search for simple and interpretable factors from amongst the initial factors. This last step is, in essence, a series or application of more precise statistical techniques which continue to locate and refine the common factors required to account for the obtained correlations between items. In actuality, there is one rotated position to be found which makes especially good theoretical sense whilst all other positions encountered are merely mathematical transformations of this position (Cattell, 1952, pp. 66-67, 427). Therefore, the ultimate goal of any rotation is to obtain the simplest theoretically meaningful factors (Nie et al., 1975, pp. 482-484; Rummel, 1970, p. 388).

There are many ways to define the underlying dimensions of the same set of data by factor analysis, and these ways are dictated primarily by the rotational solution which is employed. There is no unique and generally accepted "best" solution (i.e., not all the factor solutions are meaningful in theoretical terms). One is left to choose the best rotational method to arrive at the terminal solution that satisfies the theoretical needs of the research problem (Nie et al., 1975, pp. 469-473).

The SPSS subprogramme FACTOR was used to execute the factor analyses in the present research (Nie et al., 1975, pp. 468-514); a principal factoring method (PA2) with default iteration was employed in the initial extraction of the factors which were subsequently rotated with an oblique (OBLIQUE) and three orthogonal solutions (EQUIMAX, QUARTIMAX and VARIMAX). The results of the varimax rotation appeared to be the most meaningful theoretically. Although this particular rotation gave the best

results in theoretical terms, a similar factorial picture also emerged from the other rotations (both oblique and orthogonal). This observation is supported by Zeller and Carmines (1980, p. 43) who point out that "it frequently occurs that the interpretation of the results will not differ substantially regardless of whether an orthogonal or oblique rotational system is used."

4.4.2.3 Method: In light of the limitations of the SPSS subprogramme which was used and after maximum computer space was created, the maximum number of items that could be analysed in one run was 80. In order to meet these limitations, the initial 110 personality items were reduced to 77 by selecting the seven "best" (strongest) items in each of the eleven scales--i.e., those which demonstrated the highest item-scale correlation coefficients in the last item analysis of the data (subsection 4.4.1.3). The employment of item analysis in selecting items to be factor analysed makes good statistical sense because it increases the proportion of "true variance" in the remaining scale items which tends to increase their "commonality" and, hence, their loadings on common factors (Guilford & Fruchter, 1978, p. 445).

The process of identifying (and labelling) the factors that emerged was simply to examine the derivation of the highest loading items on each of the factors. Cattell (1952, pp. 79-80) suggests that approximately five items having high loadings on the particular factors that have emerged can give a highly reliable estimate of a factor; and according to him, the "best" loadings obtainable are somewhere in the region of .50 to .90. Factor loadings also represent the correlation of each item with the factor (a "contaminated" form of item-analysis) when an

orthogonal rotation is applied as in the present research. This correlation is the "factorial validity" of the item (Anastasi, 1982, pp. 358-364); it is a type of construct validity (Downie & Heath, 1970, p. 249; Guilford & Fruchter, 1978, p. 436) based on the item's ability to measure a particular factorial trait, or whatever is common to a group of items (Anastasi, 1982, p. 146).

Factors appear in the matrix in descending order of their importance--i.e., the first factor is the most important and powerful component accounting for most of the variance, the second is the second most important and so on (Nie et al., 1975, pp. 477, 479; Zeller & Carmines, 1980, p. 29).

4.4.2.4 Results: The first factor analysis rendered 18 factors. Twelve out of the first 14 were clearly identifiable and meaningful in theoretical terms, two factors were less clearly discernable and two could not be identified to any theoretically meaningful degree. The first 14 factors accounted for 94 % of the variance. The factor loadings for each of the 77 items on these 14 factors are found in Appendix V.

Table 4.15 reveals the first 14 factors which were extracted. The first column lists the order of factor extraction (i.e., the factor number). The next column lists the names which were given to these factors based on item composition; the scale name was given if at least four out of the seven highest loading items on the factor originated from that scale (i.e., the primary donor scale or donor). It will be observed that in two cases, a question mark follows the name which was tentatively given indicating that less than four items from the primary donor scale appeared amongst the seven highest loading items on that factor. The

third column indicates the number of highest loading items on the factor that originated from the primary donor scale; this is followed in the next column by the average factor loading of all seven donor scale items on that factor. The penultimate column lists the eigenvalues for the factor, which if followed in the last column by the percentage of variance accounted for by the factor.

TABLE 4.15

FACTOR ANALYSIS OF 77 INVENTORY ITEMS WITH A VARIMAX ROTATION AND UNLIMITED FACTOR EXTRACTION (N=322)

FACTOR NO.	NAME	HIGHEST LOADINGS FROM PRIM. DONOR	AVE. LOADING OF DONOR SCALE ITEMS	EIGEN VALUE	PER. OF VARIANCE
Factor 1	H	6/7	.64	15.0	36.4 %
Factor 2	SR	7/7	.68	5.1	12.4 %
Factor 3	P-S	6/7	.55	3.4	8.3 %
Factor 4	A	5/7	.54	2.7	6.7 %
Factor 5	ST	7/7	.57	2.3	5.6 %
Factor 6	S-A	6/7	.47	1.8	4.3 %
Factor 7	I	7/7	.45	1.4	3.4 %
Factor 8	IPR	4/7	.31	1.4	3.3 %
Factor 9	RT-?	3/7	.27	1.1	2.7 %
Factor 10	F	4/7	.27	1.1	2.6 %
Factor 11	F	6/7	.34	0.9	2.2 %
Factor 12	IPR	4/7	.27	0.9	2.1 %
Factor 13	R-?	3/7	.22	0.8	2.0 %
Factor 14	RT	5/7	.26	0.8	1.8 %

Table 4.15 reveals that the first seven factors account for 77 % of the variance in the following order of extraction: happiness (H), self regard (SR), problem-solving (P-S), assertiveness (A), stress tolerance (ST), self-actualization (S-A) and independence (I).

There are two interpersonal relationship (IPR) factors (Factors 8 and 12). Upon reviewing the nature and distribution of the highest loading items from the interpersonal relationship scale, it appears that Factor 8 is related to the nature of relationships (e.g., mutual satisfaction and intimacy) whilst Factor 12 represents that aspect which

has to do with the ability to establish and maintain social contact.

While Factor 9 suggests a factor with a definite reality testing component (RT-?), Factor 14 is more clearly seen as an actual reality testing factor (RT); the split appears to focus on the correspondence between what is experienced and what objectively exists on the one hand (Factor 9) and the ability to test this correspondence on the other (Factor 14).

There are also two flexibility (F) factors (Factors 10 and 11). Factor 10 represents the ability to adjust one's behaviour while Factor 11 is related more to the ability to adjust one's thinking and beliefs to changing situations and circumstances.

While Factor 13 demonstrates a definite social responsibility component, it could not be labelled as a clearly defined social responsibility factor as such (R-?).

In light of the fact that the above results indicate the possible existence of 12 to 14 factors, a decision was made to run two more factor analyses in which the factor output was limited to 12 and 14 factors. This was done in order to observe what would happen to the more clearly defined factors, those which indicated a splitting of the original scale into two separate factors (or sub-factors), and those factors which were not clearly defined in the initial factor analysis. In both cases, these additional factor analyses indicated the existence of 11 clearly defined factors. It is interesting to note that these 11 factors are identical to the original 11 scales. The factor loadings for the 77 items on the 12 and 14 factors which were output are listed in Appendices W and X.

Table 4.16 compares the results of the three factor analyses which were run. Following the name given to each factor which emerged,

appears the number of items from the primary donor scale which appeared amongst the seven highest loading items on that factor; this is followed (in parenthesis) by the average factor loading for all seven donor scale items on the factor.

TABLE 4.16

THE RESULTS OF THREE FACTOR ANALYSES (F.A.) CARRIED OUT ON 77 INVENTORY ITEMS WITH A VARIMAX ROTATION (N=322)

FACTOR OUTPUT	UNLIMITED F.A.	F.A. LIMITED TO 14 FACTORS	F.A. LIMITED TO 12 FACTORS
Factor 1	H 6/7(.64)	H 6/7(.64)	H 6/7(.63)
Factor 2	SR 7/7(.68)	SR 7/7(.67)	P-S 6/7(.55)
Factor 3	P-S 6/7(.55)	P-S 5/7(.55)	SR 7/7(.66)
Factor 4	A 5/7(.54)	A 5/7(.55)	A 5/7(.55)
Factor 5	ST 7/7(.57)	ST 7/7(.56)	ST 7/7(.57)
Factor 6	S-A 6/7(.47)	I 6/7(.43)	I 6/7(.40)
Factor 7	I 7/7(.45)	S-A 7/7(.45)	S-A 6/7(.44)
Factor 8	IPR 4/7(.31)	-	RT 4/7(.37)
Factor 9	RT? 3/7(.27)	-	F 7/7(.39)
Factor 10	F 4/7(.27)	F 6/7(.34)	-
Factor 11	F 6/7(.34)	R 4/7(.28)	R 4/7(.24)
Factor 12	IPR 4/7(.27)	IPR 4/7(.23)	IPR 4/7(.24)
Factor 13	R? 3/7(.22)	RT 5/7(.26)	
Factor 14	RT 5/7(.26)	-	

The above results indicate that the original proposed factorial structure has been confirmed for the most part. There are seven factors which are consistently clearly defined: happiness (H), self regard (SR), problem-solving (P-S), assertiveness (A), stress tolerance (ST), independence (I), and self-actualization (S-A). However, interpersonal relationship (IPR), reality testing (RT), flexibility (F), and social responsibility (R) appear to be the weakest factors with respect to the order of factor extraction, eigenvalues, percentage of variance accounted for, and level of factor loadings.

4.5 THE EXAMINATION OF THE VALIDITY OF THE INDIVIDUAL FACTORS

This section presents the way in which the various tests of validity were applied to the eleven factors and examines the results which were obtained.

4.5.1 Content and face validity

The systematic way in which items were generated (section 3.2) and initially selected (sections 3.3 and 3.4) was aimed at expressing the essence of each personality factor based on their definitions. This was intended to satisfy the basic assumptions of content validity that the construct or constructs to be examined are "adequately covered by the inventory items" (Anastasi, 1968, p. 100). Items were also selected on the basis of their face validity by seriously considering their apparent relevance and appropriateness for the specific nature of the target population (Anastasi, 1968, p. 104). Face validity was further satisfied by asking the mental health professionals to create statements "as if they were interviewing an average 18 to 21 year-old white English-speaking South African" (subsection 3.2.1). Additionally, when reviewing the literature and other personality inventories (subsections 3.2.2 and 3.2.3), the language was altered when necessary to meet requirements of face validity. Furthermore, the proof-readers were instructed to make additional suggestions in respect to the specific wording of the items so that they would be easily understood by the subjects (subsection 3.3.2).

A final test of the content and face validity of the items was carried out by piloting the original 240-item experimental instrument (section 3.7). The six series of item analysis aided in "weeding out" items which were poorly related to the definitions (i.e., poor content validity) and/or poorly understood by the respondents (i.e., poor face

validity). An additional indication of the approximate degree of content and face validity can be estimated by the average item-scale correlation for the 11 personality scales which was .60 based on the final item analysis of the inventory items (subsection 3.7.5); this is most satisfactory when compared with that of the Personality Research Form which ranges from .60 to .63 (Jackson, 1974, p. 17). It is thus thought that the final form of the experimental inventory has adequately satisfied the requirements of content and face validity.

Additional direct and indirect information related to content and, especially, face validity was gathered from the 39 subjects who were interviewed (subsection 4.3.2). The items were considered to be varied with many different areas represented. The inventory was generally considered not to be irritating or annoying; however, one interviewee indicated that he felt somewhat "threatened by some of the questions." The items were thought to be "interesting", "clever", "soul-searching" and "made one think about oneself." The items were generally thought to be "clear," "concise" and "straightforward." However, a number of respondents felt that there were a few vague and confusing ones. This was seen in items which were thought to be too general and not situational enough. Some of the vagueness and confusion was thought to stem from "awkward" language or wording which was not colloquial enough (e.g., "could have used more slang"). Some commented on problems with double negatives (i.e., responding in the negative to a negatively phrased item). However, one person who commented on this problem added that he felt that it was less vague and confusing than other inventories that he had responded to in the past. A few of the items were not applicable to

some of the respondents; they felt that they could not relate to them because they were outside the realm of their experience. In respect to this comment, two interviewees (approximately 5 % of those interviewed) thought that this was the case with about 20 items (approximately 15 % of the inventory). A number of the interviewees complained about redundancy (i.e., similar types of items that were noticeably repetitive). Some items (i.e., primarily on the Faking Bad Scale) "stuck out," were "too direct and obvious" and appeared "silly" or "odd" (e.g., item 77--"I think that someone is making me do things by remote control" and item 90--"Someone has been trying to kill me").

In conclusion, the feedback received from the interviewees provides additional confirmation that the inventory possesses satisfactory content and face validity.

4.5.2 Construct validity

An examination of the construct validity of each of the inventory scales (factors) is presented below. It is important to stress that while a research project primarily designed to test the construct validity of a psychometric instrument should examine correlations between that instrument and numerous external criterion scales, the limited number of external scales which were utilized in examining the *a priori* concept of psychological well-being was thought to be adequate for establishing this type of validity in the present study. Moreover, it is felt that this limited approach to construct validity is justified in the initial stages of developing or examining a concept.

Table 4.17 presents the results which were obtained from

correlating the inventory scales with the scales from the concomitantly administered tests; these external scales provided the primary criteria for examining the construct validity of the experimental inventory (subsections 4.2.2.2. and 4.3.1.3). Each inventory scale is followed by the external criterion scales with which it was correlated, the content domain of the these scales, and the correlation coefficients which were obtained. The coefficients which are presented are based on the application of the Pearson r. It is generally expected that good construct validity coefficients will fall within a range of .40 to .60 (Downie & Heath, 1970, p. 250); but even very small correlations which are significant are acceptable when one is investigating a theoretical issue as in the present study (Anastasi, 1982, pp. 159-160; Guilford & Fruchter, 1978, p. 87; Magnusson, 1967, p. 136)--e.g., McClain (1970) argues that the POI has demonstrated "good" construct validity in spite of the fact that he reports one validity coefficient of .23. The average validity coefficient for the inventory scales is .41 with coefficients ranging from .22 to .68; the vast majority of the coefficients are at or above the .40 level.

TABLE 4.17

THE DEGREE OF CORRELATION BETWEEN THE INVENTORY SCALES AND THE CONCOMITANTLY ADMINISTERED TESTS (THE EXTERNAL CRITERION SCALES)

INVENTORY SCALE	CRITERION SCALE	CONTENT DOMAIN OF THE CRITERION SCALE	VALID. COEFF.
Self Regard	16PF-O -	FEELS SECURE AND ADEQUATE, SELF-ASSURED, SELF-CONFIDENT, untroubled, placid	.51
	POI-Sr	SELF-REGARD, ATTITUDES TOWARD THE SELF, THE LIKING OF ONE'S SELF AS A PERSON, AFFIRMATION OF SELF BECAUSE OF WORTH AND/OR STRENGTH	.38
	SCL-INT	FEELINGS OF INADEQUACY AND INFERIORITY, SELF-DEPRECATION, SELF-CONSCIOUSNESS, feelings of uneasiness and marked discomfort during interpersonal interactions, negative expectations concerning communication with others and interpersonal behaviour, interpersonal sensitivity	-.52
Interpers. Rel.	16PF-H	DESIRES ESTABLISHING FRIENDLY RELATIONS, bold, adventurous	.42
	POI-C	A CAPACITY FOR INTIMATE CONTACT, the desire to respond to expectations and obligations without becoming a slave to them and without using them to exploit people	.28
	SCL-INT	INTERPERSONAL SENSITIVITY, NEGATIVE EXPECTATIONS CONCERNING COMMUNICATION WITH OTHERS AND INTERPERSONAL BEHAVIOUR, FEELINGS OF UNEASINESS AND MARKED DISCOMFORT DURING INTERPERSONAL INTERACTIONS, self-consciousness, feelings of inadequacy and inferiority, self-deprecation	-.40
Soc. Responsib.	16PF-G	SUPEREGO STRENGTH, CONSCIOUSNESS, RESPONSIBLE, DEPENDABLE, MORALISTIC, driven to do one's best, disciplined and systematic perserverance in problem-solving	.48
	SCL-HOS	IRRESPONSIBLE BEHAVIOUR, HOSTILITY, AGGRESSION, LACK OF ACCEPTANCE OF AND COOPERATION WITH OTHERS, A DISINCLINATION TO CONTRIBUTE TO THE GROUP, feelings or actions characteristic of anger, irritability, rage and resentment	-.37

TABLE 4.17--CONTINUED

INVENTORY SCALE	CRITERION SCALE	CONTENT DOMAIN OF THE CRITERION SCALE	VALID. COEFF.
Independence	16PF-E	INDEPENDENT, assertive, competitive, aggressive, excitable	.27
	16PF-Q2	INDEPENDENT, PREFERENCE FOR INDEPENDENT DECISION-MAKING, SELF-DIRECTED, SELF-SUFFICIENT, resourceful	.27
Flexibility	POI-Ex	VALUING FLEXIBILITY IN APPLYING ONE'S PRINCIPLES, THE ABILITY TO SITUATIONALLY OR EXISTENTIALLY REACT WITHOUT RIGID ADHERENCE TO PRINCIPLES, existentiality	.43
	POI-Sy	THE PERCEPTION OF OPPOSITES IN LIFE AS REALLY HAVING SOMETHING IN COMMON, THE ABILITY TO TRANSCEND DICHOTOMIES, synergy	.46
Problem-solving	16PF-G	DISCIPLINED AND SYSTEMATIC PERSERVERANCE IN PROBLEM-SOLVING, DRIVEN TO DO ONE'S BEST, conscientious, dependable, responsible, superego strength, moralistic	.42
	POI-S	SPONTANEITY, free expression of one's own feelings	.30
Assertiveness	16PF-E	ASSERTIVE, aggressive, competitive, independent, excitable	.22
Reality Testing	16PF-C	DOES NOT LET EMOTIONAL NEEDS OBSCURE REALITY OF SITUATION, FACES REALITY, ego strength, calmly faces difficulties, calm, stable	.27
	SCL-PSY	PSYCHOTICISM, symptoms of schizophrenia such as hallucinations and thought disturbances like delusions and thought-broadcasting, withdrawal, schizoid like styles	-.48
Stress Tol.	16PF-C	CALMLY FACES DIFFICULTIES, CALM, EGO STRENGTH, stable, does not let emotional needs obscure reality of situation, faces reality	.68
	16PF-Q4	RELAXED, TRANQUIL, COMPOSED	.54.
	SCL-ANX	ANXIETY, NERVOUSNESS, TENSION, apprehension, dread, terror, panic	-.38

TABLE 4.17--CONTINUED

INVENTORY SCALE	CRITERION SCALE	CONTENT DOMAIN OF THE CRITERION SCALE	VALID. COEFF.
Self-actual.	16PF-G	DRIVEN TO ONE'S BEST, disciplined and systematic PERSERVERING in problem-solving, dependable, conscientious, responsible, superego strength, moralistic	.47
	POI-I	(85 % of the items on this SELF-ACTUALIZATION inventory), the tendency to be guided by one's own principles and motives, inner support	.24
	SCL-DEP	WITHDRAWAL FROM LIFE INTERESTS, loss of motivation and vital energy, depression, suicidal signs	-.28
Happiness	16PF-F	GENERALLY HAPPY, CHEERFUL, enthusiastic, expressive, surgent	.49
	SCL-DEP	DEPRESSION, withdrawal from life interests, loss of motivation and vital energy, suicidal signs	-.56
Psych. Health	SCL-GSI	the GLOBAL SEVERITY index (the OVERALL LEVEL OF DISTRESS or PSYCHOPATHOLOGY and the CURRENT DEPTH OF DISTURBANCE)	-.60

4.5.2.1 Self regard: This scale (factor) correlated moderately high with Factor O of the 16PF and the Interpersonal Sensitivity Scale (INT) of the SCL-90; it demonstrated only a moderate correlation with the Self Regard Scale (Sr) of the POI. These results suggest that a moderate to a moderately high degree of construct validity has been demonstrated. Based on the degree of overlap between the content domain of this scale and the external criterion scales, there is confirmation that this scale is measuring basic feelings of security, adequacy, self-assurance, self-confidence and self-esteem. To a lesser extent, this scale (factor) is tapping a general feeling of inner strength and self-worth.

4.5.2.2 Interpersonal relationship: This scale demonstrated a moderate correlation with Factor H of the 16PF and the Interpersonal Sensitivity Scale (INT) of the SCL-90; however, it exhibited a relatively

weak correlation (though significant) with Scale C of the POI. The results suggest a weak to moderate degree of construct validity. Based upon an examination of the content domain of the criterion scales, it appears that this inventory scale is tapping to some degree a desire to establish social relations, positive expectations concerning communication with others and interpersonal relationships, and a general feeling of ease and comfort during such interactions. There is less confirmation for that aspect of this factor which deals with a capacity for intimate contact (POI-C=.28). However, the criterion scale employed was also designed to tap "the desire to respond to expectations and obligations without becoming a slave to them and without using them to exploit people".

4.5.2.3 Social responsibility: This scale correlated moderately with the Hostility Scale (HOS) of the SCL-90 (which taps the ways one interacts with others with an emphasis on the degree of responsible or irresponsible behaviour) and moderately high with Factor G of the 16PF (which is reputed to embody the psychoanalytic concept of superego strength or social consciousness). Based on these results, it appears that this scale has demonstrated moderate to moderately high construct validation. By comparing the overlap in content domain between the scales involved, the inventory scale is evidently measuring social consciousness, superego strength, responsibility, dependability and moralistic behaviour; to a lesser extent, it is also implies acceptance of and cooperation with others as well as an inclination to contribute to the group.

4.5.2.4 Independence: This scale demonstrated relatively weak correlation with the external scales with which it was compared. Its low

correlation (.27) with Factor E on the 16PF is understandable in that only one aspect of that factor taps "independent-mindedness" (i.e., similar to Allport's ascendance-submission) whilst most of its items are related to assertiveness, competitiveness, aggressiveness and excitability (i.e., there is little overlap of the content domain between the two scales). But it is much more surprising that it correlated equally low with Factor Q2 of the 16PF which is purported to be sensitive to independent behaviour (e.g., preference for independent decision-making, self-directivenss and self-sufficiency which is very similar to the way in which the writer conceptualized this factor). Perhaps part of this low correlation can be attributed to the fact that Factor Q2 is heavily loaded with items that express a preference to work and be by oneself rather than with others (i.e., seclusion) which suggest a dimension of independence which conceptually differs from the one described in the present study. Rather than suggesting unequivocally that the present results cast doubt on the construct validity of the Independence Scale, it could be that there is little actual overlap of content domain between the scales compared). Another way to assess the extent to which this scale is tapping the factor that it was designed to tap is to note the degree of correlation between scale scores on the Independence Scale and self-ratings and averaged other-observer ratings of this factor, which were moderate to relatively high (.51 and .56 respectively) as will be discussed in subsection 4.5.3.1.

4.5.2.5 Flexibility: This scale demonstrated a moderate correlation with the Ex Scale (existentiality) of the POI; the Ex Scale measures the ability to situationally or existentially react without rigid adherence to

principles which is quite similar to the conceptualization of flexibility in the present study (i.e., the degree of one's ability to change with changing situations and circumstances). Furthermore, it has a moderately high correlation with the Sy Scale (synergy) from the POI which is purported to measure one's ability to transcend dichotomies which also approaches that aspect of the present study's definition of accepting not only differences but contradictions in oneself, others and one's environment. The results suggest that this scale (factor) is tapping what it was intended to tap for the most part (i.e., it has demonstrated satisfactory construct validity).

4.5.2.6 Problem-solving: There was no one scale or combination of scales in the other tests that were concomitantly administered which succeeded in grasping the essence of the present definition of problem-solving in its entirety (with its strong emphasis on a multi-phasic process rather than end product). Moreover, this definition is different from the others in that it is more cognitive in nature; this made the matching with a comparable scale quite difficult in that the specific tests which were administered emphasized non-cognitive personality characteristics and symptomatology. Bearing this in mind, this scale was compared with Factor G on the 16PF which appears to tap a disciplined and systematic perseverance in approaching problems in life and a "drive to do one's best" which is similar to only one aspect of the present study's conceptualization of the problem-solving process; this resulted in a moderate correlation (.42). It was also correlated with Scale S (spontaneity) on the POI which measures the degree of general flexibility which was assumed in another one of the phases in the present

conceptualization of this factor (i.e., the degree of spontaneity and flexibility in the solution generation phase). This rendered a relatively weak validity coefficient of .30, which most likely resulted from the fact that many of the Scale S items are concerned with the "free expression of feelings". Based on these limited and preliminary results, one could conclude that the construct validity of this factor was only moderately confirmed. However, it is difficult to establish this form of validity based on these results. Although future evaluation of the construct validity of this scale must rely on better external criteria, one can roughly estimate the degree to which this scale is measuring the problem-solving factor by observing the results of correlating the self-assessments and other-observer ratings of this factor with the Problem-solving Scale scores (subsection 4.5.3.1) which are encouraging (i.e., r=.55 and r=.66 respectively).

4.5.2.7 Assertiveness: This scale demonstrated the lowest validity coefficient amongst the inventory scales when it was correlated with the external criterion scale with which it was compared (Factor E of the 16PF). However, on closer examination it can be seen that this external criterion scale is a poor facsimile of assertiveness in that it blurs the difference between assertiveness and aggressiveness; in fact, this scale puts more emphasis on aggressiveness than on assertiveness--i.e., it is not that an appropriate criterion or validator of the construct. Therefore, it was not surprising to receive a low (though significant) correlation of .22. Once again, assuming that this would unequivocally point to poor construct validity may be an erroneous conclusion. It is felt that in spite of the fact that this scale is probably tapping what it

was designed to tap, the lack of such a specific external scale to compare it with makes assessment of construct validity difficult. However, one way of overcoming this obstacle was to examine the item-scale coefficients of five piloted (subsection 3.5.7) items (13, 57, 83, 135, 187) which were directly derived from an inventory designed by Alberti and Emmons (1974) to measure assertiveness; the respective coefficients were .52, .41, .41, .80 and .49 with and average item-scale correlation of .53. This suggests that there is a moderately high degree of overlap between the content domain of these five items and that of the pilot version of the Assertiveness Scale (i.e., they are tapping similar aspects of this factor); if these items can be used as external criteria of the factor being studied, it would then appear that the factor possesses good construct validity. An additional method of assessing the extent to which this scale is measuring what it was intended to measure was to examine the degree of correlation between self-ratings and pooled other-observer ratings of this factor and the scale scores for the Assertiveness Scale (which will be presented and discussed in full in subsection 4.5.3.1); the respective coefficients are .75 and .73.

4.5.2.8 Reality testing: Here again, it is difficult to accurately evaluate the construct validity of this scale (factor) based exclusively on the correlation coefficients which resulted from comparing it with the external criterion scales. More succinctly, it was felt that the criterion scales did not tap the essence of the present definition of reality testing (i.e., there was not a lot of overlap between the content domain of the scales which were compared). Furthermore, the writer is not familiar with any other self-report inventory which approaches the

specific process-oriented definition of reality testing as used in the present study. Most inventories tend to look at the end product of reality testing (i.e., reality contact) rather than the process involved therein (i.e., reality testing). In spite of this, a moderately high correlation (-.48) was obtained when it was compared with the PSY (psychoticism) Scale of the SCL-90. This suggests that people who score high on the Reality Testing Scale face reality and difficulties in life without perceptual disturbances, thought disorders or by radically withdrawing from society. It's lower correlation (.27) with the 16PF's Factor C may be related to the fact that this factor measures "general stability and the ability to calmly face difficulties" in addition to a weak facsimile of reality testing.

4.5.2.9 Stress tolerance: This scale exhibited a relatively high correlation with the 16PF's Factor C; and when it was correlated with Factor Q4 of the 16PF and the Anxiety Scale (ANX) of the SCL-90, it demonstrated moderate to moderately high coefficients respectively. These results suggest moderately high construct validity. Based on the degree of overlap between the content domain of the scales which were compared, the Stress Tolerance Scale measures the general degree of calmness or anxiety encountered in facing and dealing with difficulties (what has been referred to as "ego strength" or "coping ability" by others).

4.5.2.10 Self-actualization: This is another scale which demonstrated a relatively low degree of correlation with the external criterion scales. While it correlated rather weakly (.24) with the POI's I Scale (i.e., the most comprehensive scale of that inventory representing

85 % of the items which were designed to measure various aspects of self-actualization), it correlated higher (.47) with Factor C on the 16PF and with the Depression Scale (DEP) on the SCL-90 (-.28). These results indicate rather weak construct validity and suggest that this inventory scale is not tapping self-actualization. However, the present scale may be reflecting a more narrow definition of this factor related to a stable persistence or perserverance with one's hobbies and the pursuance of one's interests in life (the lack of which is one of the signs of clinical depression). One possible explanation for the "surprisingly" low correlation with the I Scale of the POI is that this inventory (and scale) is composed of many different types of items designed to grasp a very broad and heterogeneous approach to self-actualization; the POI is primarily based on Maslow's conceptualization of this construct which is nearly synonymous with psychological well-being (subsection 2.2.2.1). Therefore, the rather weak correlation between the writer's scale and this particular criterion scale is understandable--i.e., there is very little overlap of content domain between them. It is important to note that there is a relatively high degree of correlation between scale scores on the Self-actualization Scale and self-ratings (.68) and pooled other-observer ratings (.55) of this factor (subsection 4.5.3.1), which indicates that this scale is nevertheless tapping what it was specifically designed to tap.

4.5.2.11 Happiness: When the Happiness Scale was compared with the Depression Scale (DEP) on the SCL-90, it resulted in a moderately high correlation (-.56). It also correlated well (.49) with the 16PF's Factor F. These results suggest that this scale possesses moderately high

construct validity. An examination of the overlap between this scale and the external criterion scales with which it was correlated confirm that it is measuring the degree to which one is generally happy and cheerful.

4.5.2.12 Psychological health: The Psychological Health Scale (a psychometric representation of the a priori concept of psychological well-being) demonstrated one of the highest degrees of correlation amongst the experimental inventory scales which were correlated with the various external criterion scales. A correlation coefficient of -.60 was obtained when correlating it with the GSI Scale (Global Severity Index) on the SCL-90 which is purported to represent the best single indicator of the current level or depth of psychological health in that inventory. This is a most important finding because it indicates that this inventory (concept) possesses relatively high construct validity (i.e., it is tapping psychological well-being).

4.5.3 Convergent criterion-related validity

As was previously stated (subsection 4.2.2.3), convergent criterion-related validation was attempted by (a) correlating the inventory scale scores with other-observer ratings and self-assessments of the eleven factors involved and overall psychological health and by (b) correlating the inventory's psychological health score with the expressed need for psychological help. The results are presented and discussed below.

4.5.3.1 The correlation between the interviewees' inventory scale scores and the other-observers' ratings and self-assessments of the eleven factors: Based on the results of inter-judge reliability presented in subsection 4.3.2.3, it was reasoned that the degree of inter-judge reliability justifies averaging (or pooling) the other-observers' ratings enabling them to be used as external criteria of the inventory scales. Moreover, an overall inter-judge reliability of .68 suggests that there was a fairly high degree of agreement between the other-observers in general; such a high level of inter-judge reliability can be considered to be a good estimate of the validity of these ratings (Anastasi, 1982, pp. 117-118). This approach of pooling or averaging the other-observers' ratings was used by Jackson (1974, p. 24) in the construction of the Personality Research Form to provide a kind of consensus regarding the degree to which each of the personality traits were thought to be present. In light of the fact that the highest degree of inter-judge reliability for the three estimates of psychological health was demonstrated for the first estimate (psych. health 1), this will be the only one used in examining the convergent criterion-related validity of the experimental inventory's overall measure of psychological well-being. Table 4.18 presents the correlation coefficients which were obtained from comparing the interviewees' mean scale scores on the experimental inventory with the averaged other-observers' ratings and self-assessments of the 11 personality factors and overall degree of psychological health (Table 4.11 in subsection 4.3.2.3).

TABLE 4.18

CORRELATION OF THE INTERVIEWEES' EXPERIMENTAL INVENTORY SCALE SCORES WITH OTHER-OBSERVER RATINGS AND SELF-ASSESSMENTS OF THE 11 PERSONALITY FACTORS AND THE OVERALL ESTIMATE OF PSYCHOLOGICAL WELL-BEING (N=39)

SCALE	AVERAGE OTHER-OBSERVER RATING	SELF-ASSESSMENT
Self Regard	.53	.56
Interpersonal Relationship	.45	.67
Social Responsibility	.12	.38
Independence	.56	.51
Flexibility	.56	.30
Problem-solving	.66	.55
Assertiveness	.73	.75
Reality Testing	.58	.46
Stress Tolerance	.41	.64
Self-actualization	.55	.68
Happiness	.53	.61
Psychological Health (1)	.57	.76
Average correlation	.52	.57

In general, the degree of correlation between the pooled other-observer ratings and the inventory scales is high (i.e., the average is .52). When observer ratings are used as the external criterion, the validity coefficients generally tend to be in "the middle of the range" (Downie & Heath, 1970, p. 250) which was achieved in the present research as is indicated by the above results; the average correlation obtained here compares favourably with that of the Personality Research Form (i.e., an average of .47) which is purported to "exceed those typically reported for personality inventories" (Jackson, 1974, pp. 24-25). The highest are for assertiveness, problem-solving and reality testing whilst the lowest is for social responsibility (i.e., an indication of the difficulty encountered in assessing this factor and/or in applying the way in which the factor was defined). The degree of correlation between the self-assessment of these factors (and overall degree of psychological

well-being) and the inventory scale scores is even higher with the average being .57; the highest correlation was demonstrated for the overall degree of psychological well-being while the two lowest was for flexibility and social responsibility. This is impressive when compared with the Personality Research Form which achieved an average correlation of .45 when using self-assessments as the external criterion (Jackson, 1974, pp. 24-25, 32).

4.5.3.2 The correlation between the experimental inventory's psychological health scale score and the expressed need for psychological/psychiatric help: The second approach of assessing convergent criterion-related validity was carried out by examining the degree of correlation between the experimental inventory's Psychological Health Score and the need for professional help in order to deal with emotional problems as expressed by the interviewees. This revealed a moderate correlation of -.41.

4.5.4 Discriminant criterion-related validity

As was previously stated (subsection 4.2.2.3), two approaches were undertaken to examine discriminant criterion-related validity by testing for significant differences on the inventory's scales between (a) subjects divided into three psychological health groups and between (b) clinical subjects and a matched group from the general sample. The procedures involved and results obtained are presented below.

4.5.4.1 Testing for significant differences on the inventory's scales between subjects divided into three psychological health groups based upon the results of the concomitantly administered psychological tests: Three different tests of significant differences were run for (a) those who completed the 16PF (72 subjects), (b) those who completed the POI (63 subjects), and (c) those who completed the SCL-90 (65 subjects). A fourth test was then run which combined all three of these groups (200 subjects).

Those subjects who completed the 16PF were divided into three equal groups based upon a frequency distribution of their scores on Factor O. This factor was selected because it is thought to be one of the most sensitive indicators of psychological health amongst the 16PF's scales (Cattell et al., 1970, pp. 101-103); it is considered to be a valid measure of general anxiety (Hundleby & Connor, 1968) which is capable of significantly distinguishing different levels of psychological health (Tamkin & Sonkin, 1969). Hundleby and Connor (1968) revealed a correlation of .46 between Factor O and a general measure of psychological health as defined by the Maudsley Personality Inventory which was administered to 267 adult subjects; and Tamkin and Sonkin (1969) demonstrated that this factor was able to significantly differentiate psychotic (N=25) from neurotic (N=38) outpatients at the .05 level. The frequency distribution for Factor O indicated that 24 subjects received a scale score ranging from 3 to 9 (the above average psychological health group), 24 subjects received a scale score that ranged from 10 to 13 (the average psychological health group), and 24 received scores ranging from 14 to 19 (the below average psychological health group). A oneway analysis of variance was employed (using the CONTRAST subprogramme of SPSS) in order to examine the level of difference between these three

groups on the inventory scale scores (i.e., between the first and the second group, between the first and the third, and between the second and the third group). The tables below list the mean scale scores for the three psychological health groups (Table 4.19) and the levels of probability of significant difference between them indicated by t values and the levels of t probability (Table 4.20). The levels of probability are based on a one-tailed examination which was justified by the directionality of the hypothesis (i.e., psychological well-being is a function of the degree to which individuals possess certain personality factors); furthermore, it is more powerful than a two-tailed evaluation (Downie & Heath, 1970, p. 170; Guilford & Fruchter, 1978, p. 154; Siegel, 1956. p. 11) or as Hays (1973, pp. 369-370) put it: "We get a little more statistical credit in the one-tailed test for asking a more searching question."

TABLE 4.19

MEAN INVENTORY SCALE SCORES FOR THE THREE PSYCHOLOGICAL HEALTH (PH) GROUPS, DIVIDED BY THE 16PF'S FACTOR O (N=72)

SCALE	GROUP 1: BELOW AVE. PH	GROUP 2: AVE. PH	GROUP 3: ABOVE AVE. PH
Self regard -----	-- 44 --	-- 47 --	-- 53 --
Interpersonal rel.	-- 47 --	-- 50 --	-- 49 --
Social responsib.	-- 49 --	-- 51 --	-- 52 --
Independence ----	-- 46 --	-- 50 --	-- 51 --
Flexibility -----	-- 43 --	-- 43 --	-- 42 --
Problem-solving -	-- 52 --	-- 54 --	-- 53 --
Assertiveness ---	-- 43 --	-- 45 --	-- 50 --
Reality testing -	-- 47 --	-- 48 --	-- 51 --
Stress tolerance	-- 42 --	-- 46 --	-- 52 --
Self-actualization	-- 50 --	-- 55 --	-- 56 --
Happiness -------	-- 51 --	-- 55 --	-- 58 --
Psych. health ---	- 514 --	- 544 --	- 567 --

TABLE 4.20

LEVELS OF PROBABILITY OF SIGNIFICANT DIFFERENCE ON THE INVENTORY SCALES BETWEEN THE BELOW AVERAGE (GRP 1), AVERAGE (GRP 2) AND ABOVE AVERAGE PSYCHOLOGICAL HEALTH (GRP 3) GROUPS DIVIDED BY THE 16PF'S FACTOR O (N=72, D.F. BETWEEN GROUPS=2 AND D.F. WITHIN GROUPS=70)

SCALE	GRP 1 AND GRP 2		GRP 1 AND GRP 3		GRP 2 AND GRP 3	
	t VALUE	t PROB.	t VALUE	t PROB.	t VALUE	t PROB.
Self Regard -----	-1.6	.06	-4.7	.00	-2.8	.00
Interpersonal Rel.	-1.3	.10	-0.4	.34	0.9	.19
Social Responsib.	-1.5	.07	-1.7	.05	-0.2	.41
Independence ----	-1.9	.03	-2.1	.02	-0.3	.37
Flexibility -----	-0.2	.44	0.3	.37	0.5	.31
Problem-solving -	-0.8	.22	-0.6	.26	0.1	.45
Assertiveness ---	-0.9	.18	-3.0	.00	-2.6	.01
Reality Testing -	-0.6	.26	-2.7	.01	-2.1	.02
Stress Tolerance	-2.0	.03	-5.8	.00	-2.9	.00
Self-actualization	-1.9	.04	-2.4	.01	-0.6	.28
Happiness -------	-1.6	.01	-2.7	.01	-1.2	.11
Psych. Health ---	-2.0	.03	-3.0	.00	-1.2	.12

The above process was repeated for the 63 subjects who completed the POI. They were divided into three psychological health groups based upon Scale I. This scale was used in that it is the best single estimate of self-actualization (Knapp, 1965) having demonstrated high construct validity (McClain, 1970); it is a composite score accounting for 85 % of the inventory items (Shostrom, 1974) and is able to significantly distinguish between different levels of psychological health (Knapp, 1965). The frequency distribution for this scale indicated that 20 subjects obtained scores ranging from 60 to 76 (the below average psychological health group), 22 obtained a scores ranging from 77 to 84 (the average psychological health group) and 21 obtained scores which ranged from 85 to 99 (the above average psychological health group). The tables below list the mean scale scores for the three psychological health groups (Table 4.21) and the levels of probability of significant difference between them indicated by t values and the levels of t

probability (Table 4.22).

TABLE 4.21

MEAN INVENTORY SCALE SCORES FOR THE THREE PSYCHOLOGICAL HEALTH (PH) GROUPS, DIVIDED BY THE POI'S I SCALE (N=63)

SCALE	GROUP 1: BELOW AVE. PH	GROUP 2: AVE. PH	GROUP 3: ABOVE AVE. PH
Self Regard -----	-- 46 --	-- 49 --	-- 53 --
Interpersonal Rel.	-- 48 --	-- 50 --	-- 53 --
Social Responsib.	-- 50 --	-- 51 --	-- 48 --
Independence ----	-- 48 --	-- 49 --	-- 54 --
Flexibility -----	-- 42 --	-- 41 --	-- 50 --
Problem-solving -	-- 53 --	-- 52 --	-- 55 --
Assertiveness ---	-- 43 --	-- 47 --	-- 52 --
Reality Testing -	-- 46 --	-- 47 --	-- 49 --
Stress Tolerance	-- 48 --	-- 47 --	-- 51 --
Self-actualization	-- 52 --	-- 52 --	-- 56 --
Happines --------	-- 53 --	-- 52 --	-- 58 --
Psych. Health ---	- 529 --	- 537 --	- 579 --

TABLE 4.22

LEVELS OF PROBABILITY OF SIGNIFICANT DIFFERENCE ON THE INVENTORY SCALES BETWEEN THE BELOW AVERAGE (GRP 1), AVERAGE (GRP 2) AND ABOVE AVERAGE PSYCHOLOGICAL HEALTH (GRP 3) GROUPS DIVIDED BY THE POI'S I SCALE (N=63, D.F. BETWEEN GROUPS=2 AND D.F. WITHIN GROUPS=61)

SCALE	GRP 1 AND GRP 2		GRP 1 AND GRP 3		GRP 2 AND GRP 3	
	t VALUE	t PROB.	t VALUE	t PROB.	t VALUE	t PROB.
Self Regard -----	-1.1	.14	-2.7	.01	-1.8	.04
Interpersonal Rel.	-0.6	.27	-2.2	.02	-1.6	.06
Social Responsib.	-0.5	.32	0.8	.21	1.3	.10
Independence ----	-0.5	.32	-2.9	.00	-2.6	.01
Flexibility -----	0.3	.37	-3.7	.00	-4.0	.00
Problem-solving -	0.8	.21	-0.9	.19	-1.7	.05
Assertiveness ---	-1.6	.01	-3.3	.00	-2.3	.01
Reality Testing -	-0.4	.34	-1.4	.09	-1.0	.17
Stress Tolerance	1.3	.09	-0.8	.22	-2.5	.01
Self-actualization	0.1	.45	-1.6	.06	-1.7	.05
Happiness -------	-0.2	.43	-2.3	.02	-2.4	.01
Psych. Health ---	-0.6	.29	-2.7	.01	-2.5	.01

The same procedure was employed with respect to the 65 subjects

who completed the SCL-90. They were divided into three psychological health groups based upon the GSI Scale; this scale was chosen because it is thought to be that inventory's best indicator of an overall level of psychological health (subsection 4.3.1.3). The frequency distribution for this scale indicated that 21 subjects obtained scores ranging from 87 to 297 (the below average psychological health group), 23 received scores ranging from 50 to 83 (the average psychological health group) and 21 received scores ranging from 11 to 47 (the above average psychological health group). The tables below list the mean scale scores for the three psychological health groups (Table 4.23) and the levels of probability of significant difference between them indicated by t values and the levels of t probability (Table 4.24).

TABLE 4.23

MEAN INVENTORY SCALE SCORES FOR THE THREE PSYCHOLOGICAL HEALTH (PH)GROUPS, DIVIDED BY THE SCL-90 GSI SCALE (N=65)

SCALE	GROUP 1: BELOW AVE. PH	GROUP 2 AVE. PH	GROUP 3: ABOVE AVE. PH
Self Regard -----	-- 43 --	-- 49 --	-- 52 --
Interpersonal Rel.	-- 46 --	-- 51 --	-- 54 --
Social Responsib.	-- 47 --	-- 51 --	-- 54 --
Independence ----	-- 47 --	-- 51 --	-- 50 --
Flexibility -----	-- 43 --	-- 46 --	-- 46 --
Problem-solving -	-- 52 --	-- 54 --	-- 57 --
Assertiveness ---	-- 43 --	-- 48 --	-- 49 --
Reality Testing -	-- 43 --	-- 49 --	-- 52 --
Stress Tolerance	-- 46 --	-- 49 --	-- 53 --
Self-actualization	-- 50 --	-- 54 --	-- 58 --
Happiness -------	-- 48 --	-- 55 --	-- 60 --
Psych. Health ---	- 508 --	- 557 --	- 585 --

TABLE 4.24

LEVELS OF PROBABILITY OF SIGNIFICANT DIFFERENCE ON THE INVENTORY SCALES BETWEEN THE BELOW AVERAGE (GRP 1), AVERAGE (GRP 2) AND ABOVE AVERAGE PSYCHOLOGICAL HEALTH (GRP 3) GROUPS DIVIDED BY THE SCL-90'S GSI SCALE (N=65, D.F. BETWEEN GROUPS= AND D.F. WITHIN GROUPS=63)

SCALE	GRP 1 AND GRP 2		GRP 1 AND GRP 3		GRP 2 AND GRP 3	
	t VALUE	t PROB.	t VALUE	t PROB.	t VALUE	t PROB.
Self Regard -----	-2.7	.01	-3.5	.00	-1.4	.08
Interpersonal Rel.	-2.5	.01	-3.7	.00	-1.5	.07
Social Responsib.	-2.4	.01	-3.3	.00	-1.3	.11
Independence ----	-1.4	.08	-1.2	.11	0.2	.43
Flexibility -----	-1.6	.06	-1.4	.09	0.2	.44
Problem-solving -	-0.9	.20	-2.3	.01	-1.7	.05
Assertiveness ---	-2.3	.01	-2.5	.01	-0.4	.36
Reality Testing -	-2.9	.00	-4.2	.00	-1.8	.05
Stress Tolerance	-1.5	.08	-3.1	.00	-1.8	.04
Self-actualization	-1.7	.05	-3.4	.00	-1.7	.05
Happiness -------	-3.2	.00	-5.6	.00	-3.1	.00
Psych. Health ---	-3.4	.00	-4.9	.00	-2.2	.02

A fourth approach to testing for significant differences on the inventory scale scores between those subjects who possess different levels of psychological well-being was to combine the subjects who were previously identified as exhibiting average, above average and below average psychological health based on the above-mentioned scores on the concomitantly administered tests (16PF's Factor O, POI's Scale I and SCL-90's GSI). This created three large (psychological health) groups. Although this method does not employ the same criterion or the same set of criteria to establish group membership in each case, it is justified in that each of the separate criteria are capable in and of themselves of identifying various levels of psychological health. This would be similar to creating three large psychological health groups each of which were composed of smaller groups of individuals evaluated as possessing different levels of psychological health based on the separate evaluations of (three) different clinicians. In this approach as well as that adopted

in the present research, there would definitely be some degree of disparity regarding the way in which the subjects' psychological health is assessed (i.e., the same individual might be placed in different groups based on who evaluated him/her and how). However, it was thought that this degree of potential disparity between methods would not significantly effect the results. This method rendered a below average psychological health group of 65 subjects, an average psychological health group of 69 and an above average psychological health group of 66. The advantage of this approach was that it increased the groups' size. It was thought that this would give a more accurate picture in examining discriminant criterion-related validity. The power of a statistical procedure generally increases with an increase in sample size (Hays, 1973, p. 360); and the larger the sample, the more sound is the interpretation of the results (Siegel, 1956, p. 9). The tables below list the mean scale scores for the three psychological health groups (Table 4.25) and the levels of probability of significant difference between them indicated by t values and the levels of t probability (Table 4.26).

TABLE 4.25

MEAN INVENTORY SCALE SCORES FOR THE THREE PSYCHOLOGICAL HEALTH (PH) GROUPS (DIVIDED BY THE 16PF'S FACTOR O, THE POI'S SCALE I AND SCL-90'S GSI SCALE)--N=200

SCALE	GROUP 1: BELOW AVE. PH	GROUP 2: AVE. PH	GROUP 3: ABOVE AVE. PH
Self Regard -----	-- 44 --	-- 48 --	-- 53 --
Interpersonal Rel.	-- 47 --	-- 50 --	-- 52 --
Social Responsib.	-- 48 --	-- 51 --	-- 51 --
Independence ----	-- 47 --	-- 50 --	-- 52 --
Flexibility -----	-- 43 --	-- 43 --	-- 46 --
Problem-solving -	-- 53 --	-- 53 --	-- 55 --
Assertiveness ---	-- 43 --	-- 47 --	-- 50 --
Reality Testing -	-- 45 --	-- 48 --	-- 51 --
Stress Tolerance	-- 45 --	-- 47 --	-- 52 --
Self-actualization	-- 51 --	-- 53 --	-- 56 --
Happiness -------	-- 51 --	-- 55 --	-- 59 --
Psych. Health ---	- 517 --	- 546 --	- 577 --

TABLE 4.26

LEVELS OF PROBABILITY OF SIGNIFICANT DIFFERENCE ON THE INVENTORY SCALES BETWEEN THE BELOW AVERAGE (GRP 1), AVERAGE (GRP 2) AND THE ABOVE AVERAGE (GRP 3) PSYCHOLOGICAL HEALTH GROUPS DIVIDED BY THE 16PF'S FACTOR O, THE POI'S I SCALE AND THE SCL-90'S GSI SCALE (N=200)

SCALE	GRP 1 AND GRP 2		GRP 1 AND GRP 3		GRP 2 AND GRP 3	
	t VALUE	t PROB.	t VALUE	t PROB.	t VALUE	t PROB.
Self Regard -----	-3.1	.00	-6.2	.00	-3.5	.00
Interpersonal Rel.	-2.4	.01	-3.2	.00	-1.0	.16
Social Responsib.	-2.4	.01	-2.4	.01	-0.2	.43
Independence ----	-2.3	.01	-3.5	.00	-1.5	.07
Flexibility -----	-0.8	.23	-2.3	.01	-1.6	.06
Problem-solving -	-0.5	.32	-2.1	.02	-1.9	.03
Assertiveness ---	-2.7	.00	-5.2	.00	-2.9	.00
Reality Testing -	-2.4	.01	-4.8	.00	-2.8	.00
Stress Tolerance	-1.1	.14	-5.2	.00	-4.1	.00
Self-actualization	-2.0	.03	-4.2	.00	-2.4	.01
Happiness -------	-2.8	.00	-6.0	.00	-3.7	.00
Psych. Health ---	-3.4	.00	-6.2	.00	-3.3	.00

In order to receive a clearer picture of the results received from these four approaches to examining discriminant criterion-related

validity, Table 4.27 summarizes the various levels of probability of significant differences (t probability) on the inventory scales between subjects divided into three psychological health groups separately by the 16PF's Factor O, the POI's Scale I and the SCL-90's GSI Scale and by all of these criteria combined.

TABLE 4.27

LEVELS OF PROBABILITY OF SIGNIFICANT DIFFERENCE ON THE INVENTORY SCALES BETWEEN SUBJECTS DIVIDED INTO THREE PSYCHOLOGICAL HEALTH GROUPS (PH) SEPARATELY BY THE 16PF'S FACTOR O, THE POI'S SCALE I AND THE SCL-90'S GSI SCALE AND BY ALL OF THESE CRITERIA COMBINED (ALL)

	BELOW AVE. WITH AVE. PH				BELOW AVE. WITH ABOVE AVE. PH				AVE. WITH ABOVE AVE. PH			
SCALE	16PF	POI	SCL	ALL	16PF	POI	SCL	ALL	16PF	POI	SCL	ALL
Self Reg.	.06	.14	.01	.00	.00	.01	.00	.00	.00	.04	.08	.00
Int. Rel.	.10	.27	.01	.01	.34	.02	.00	.00	.18	.06	.07	.16
Soc. Resp.	.09	.32	.01	.01	.05	.22	.00	.01	.41	.10	.11	.43
Independ.	.03	.32	.08	.01	.02	.00	.12	.00	.37	.01	.43	.07
Flexibil.	.44	.37	.08	.23	.37	.00	.08	.01	.30	.00	.44	.06
Prob.-sol.	.23	.21	.20	.32	.27	.21	.01	.02	.44	.04	.05	.03
Assertive.	.18	.07	.01	.00	.00	.00	.01	.00	.01	.01	.36	.00
Reality T.	.26	.33	.00	.01	.01	.09	.00	.00	.02	.18	.05	.00
Stress. T.	.03	.09	.08	.14	.00	.22	.00	.00	.00	.01	.04	.00
Self-act.	.04	.45	.05	.03	.01	.08	.00	.00	.28	.03	.05	.01
Happiness	.01	.43	.00	.00	.01	.02	.00	.00	.11	.01	.00	.00
Psy. Hlth.	.03	.29	.00	.00	.00	.01	.00	.00	.12	.01	.02	.00

Table 4.25 indicates that there is a consistent increase in scale scores from the below average to above average psychological health groups which was expected. Table 4.26 reveals that there is a highly significant difference between all three groups on the psychological health scale at

the .00 level. This means that the inventory is able to make extremely fine differentiations between those who possess below average, average and above average psychological well-being. Other scales which are able to differentiate all three groups (Table 4.27) are Self Regard, Independence, Assertiveness, Reality Testing, Stress Tolerance, Self-actualization and Happiness (i.e., the majority of the scales). The Interpersonal Relationship and Social Responsibility Scales are able to significantly differentiate between below average and average and between below average and above average psychological health, but not between the average and above average groups. The Flexibility and Problem-solving Scales significantly differentiate between below average and above average and between average and above average psychological health, but not between the below average and average groups.

4.5.4.2 Testing for significant differences on the inventory's scales between a clinical and non-clinical (general) sample: The second approach which was employed in assessing discriminant criterion-related validity was carried out by comparing an identified clinical sample with a matched group of subjects from the general sample (subsection 4.3.4) in respect to their performance on the experimental inventory.

It can be observed from Table 4.14 that there is a significant difference between the two samples beyond the .01 level on the degree of psychological health between them. This means that the Psychological Health Scale is again successful in significantly distinguishing individuals who possess poor psychological health from those who possess average psychological well-being. There are also significant differences between these two samples on 7 out of 11 personality scales. There was no significant difference between the two groups on Interpersonal

Relationship, Independence, Flexibility, and Problem-solving. Out of 8 significant differences on the inventory scales, 7 were at or beyond the .01 level, and one at the .03 level.

This comparison between an identified (external) clinical sample and a matched group of subjects from the general sample is analogous to the previous tests of significant differences when the below average psychological health groups were compared with the average psychological health groups.

It is thought that comparing more severely disturbed subjects with a non-clinical sample would have demonstrated more and higher levels of significant differences. It is logical to assume that such a sample would exhibit lower scale scores thus widening the distance between mean scores between the samples being compared.

4.6 THE EXAMINATION OF THE RELIABILITY OF THE INDIVIDUAL FACTORS

As was previously stated in subsection 4.2.3, reliability was assessed by applying various procedures designed to examine the internal consistency and stability of the experimental inventory. The results are presented and discussed in the present section.

4.6.1 Internal consistency

Table 4.28 reveals the Cronbach alpha coefficients and the average item-scale correlations (subsection 4.4.1.3) for each inventory scale.

TABLE 4.28

CRONBACH ALPHA COEFFICIENTS AND AVERAGE ITEM-SCALE CORRELATIONS FOR THE INVENTORY SCALES

SCALE	CRONBACH ALPHA COEF.	AVE. ITEM-SCALE CORR.
Self Regard	.84	.65
Interpersonal Rel.	.80	.61
Soc. Responsibility	.60	.47
Independence	.80	.60
Flexibility	.64	.49
Problem-solving	.82	.62
Assertiveness	.80	.60
Reality Testing	.72	.54
Stress Tolerance	.85	.65
Self-actualization	.85	.67
Happiness	.86	.67

The Cronbach alpha coefficients are high for all of the factors, ranging from .60 to .86 with an overall average of .78. This indicates very good reliability, especially when one takes into consideration that all internal consistency procedures tend to underestimate the actual reliability (Guilford & Fruchter, 1978, p. 429). Stress tolerance, self-actualization and happiness demonstrated the highest degree of reliability while social responsibility and flexibility have the "lowest". These results compare quite favourably with the consistency coefficients obtained for a number of well-known personality inventories (Anastasi, 1982, pp. 512-519). For example, the consistency coefficients for the Personality Research Form average .76 (with a range of .41 to .90), coefficients for the 16PF scales are in the .50s, those for the Guilford-Zimmerman Temperament Survey range from .75 to .85, and consistency measures for the Edwards Personal Preference Schedule range from .60 to .87. This indicates that the experimental inventory is a very reliable instrument in comparison to well-known and well-established

inventories of this type.

The average item-scale correlation for the personality scales is .60, identical to that of the Personality Research Form (Jackson, 1970, p. 85). This is an additional indication of the inventory's high level of internal consistency (reliability). The scales that demonstrated the highest item-scale correlations are Self Regard, Stress Tolerance, Self-actualization and Happiness, while Social Responsibility and Flexibility demonstrated the lowest. These results are very encouraging for a number of reasons. For example, Guilford and Fruchter (1978, p. 446) point out that "item-scale correlations for well constructed items range from .30 to .80," and "items within these ranges of correlation should provide tests of both satisfactory reliability and validity" which proved to be the case in the present study. Furthermore, these high coefficients suggest that the majority of the scale items are well constructed and that their "content saturation" is high which indicates "good" content validity--i.e., they are tapping what the scale is tapping for the most part (Jackson, 1970, p. 73).

4.6.2 Retest (stability) reliability

As was previously mentioned in subsection 4.3.3, one group of subjects (44) was retested after one month and a second group (27) after four months.

The results (Table 4.13) reveal that the average retest reliability for the one-month retest interval is quite high (.85) with stability coefficients ranging from .78 (Social Responsibility) to .92 (Self Regard). The measure of overall psychological well-being also appears very stable for this period of time (.90). These results compare

quite favourably with the retest reliability of the Personality Research Form which averaged .80 after one week, with the 16PF which was less than .80 at one week, and with the Edwards Personal Preference Schedule which ranges from .74 to .88 at a one week interval (Anastasi, 1982, pp. 514-519).

The average retest reliability for the four-month retest interval is also high (.75). The overall measure of psychological well-being appears to be just as stable at four months (.90) as it was at one month; the most stable or constant personality scale (factor) after four months is apparently Flexibility (.82) and the "least stable" is Stress Tolerance (.55) which appears to fluctuate more than other scales over time. Even at four months, these stability coefficients exceed those of the MMPI which range from the .50s to the low .90s (Anastasi, 1982, p. 506).

When comparing the test-retest results for the two interval there is an average drop between correlation coefficients of .10. There are two inventory scales which exhibited no decrease in the stability coefficients at all between the two retest periods (i.e., the Flexibility and the Psychological Health Scale). Another fairly stable scale appears to be Social Responsibility. Those scales with the highest stability coefficients when comparing retest performance at one month with that at four months are Reality Testing and Stress Tolerance.

When both retest periods are considered together, the stability coefficients are quite similar to the internal consistency coefficients (subsection 4.6.1). This confirms the very satisfactory level of reliability which has been achieved.

CHAPTER FIVE

CONCLUSIONS: THE A POSTERIORI CONCEPT OF PSYCHOLOGICAL WELL-BEING THAT EMERGED

5.1 INTRODUCTION

The primary aim of this chapter is to summarize the findings that were presented in the previous chapters in order to reach a conclusion as to their meaning and implications for the concept of psychological well-being that emerged from the present study (i.e., the a posteriori concept).

Following a detailed discussion of the nature of the a posteriori concept that emerged, the following sections will briefly focus on its relation to and juxtaposition with the mental health literature and the potential application of the concept; the chapter concludes with a brief

summary of the major findings, conclusions and central issues that emerged.

5.2 THE NATURE OF THE A POSTERIORI CONCEPT

The primary approach employed in developing the concept of psychological well-being, which has been emphasized throughout the thesis, was based on a logical progression of four inter-related stages: (1) the identification of key factors purported to be related to psychological well-being based on the writer's clinical experience and review of the mental health literature, (2) operationally defining these factors, (3) the construction of an inventory specifically designed to examine the a priori concept based on the definitions, and (4) the administration of the experimental inventory in a validity and reliability study. The emergence of the a posteriori concept is primarily a function of the psychometric properties of the experimental inventory which have been demonstrated. The nature of this concept is based on those factorial components which fared the best after numerous and varied methodological and statistical procedures were applied. This general approach to conceptualization has been fully justified in section 3.1. Once again, it is important to stress that the results of the present study should be viewed as an indication of what psychological well-being is. More succinctly, those scales which did not fare well psychometrically do not unequivocally mean that the factors involved are not part (or an important part) of psychological well-being. It is quite possible that "poor" results were received because the factor was poorly conceptualized and defined, inadequate or inappropriate items were selected to represent it, and inefficient and insufficient methods were used to validate the scale

involved.

The approach adopted to summarize, discuss and interpret the results is to integrate the major findings related to (1) the overall structure of the concept and (2) the individual factors involved therein. The first subsection describes the overall factorial structure of the a posteriori concept and the second focuses on an in depth view of each factorial component.

5.2.1 The overall factorial structure and general nature of the concept that emerged

The results of the three factor analyses (subsection 4.4.2.4) support the proposed factorial structure of the a priori formulation of psychological well-being (section 2.4). The findings suggest that the most clearly structured and defined factorial components of this concept are self regard, independence, problem-solving, assertiveness, stress tolerance, self-actualization and, especially, happiness whilst the least clearly structured factors that emerged are reality testing, interpersonal relationship, flexibility and, especially, social responsibility. Therefore, it can be concluded that the hypothesis related to the basic structure of the a priori concept with respect to its factorial components was confirmed for the most part with the possible exception of social responsibility (i.e., the a posteriori concept which evolved is quite similar to the a priori formulation).

The inventory constructed to examine the concept and its factorial components demonstrated satisfactory validity (with the exception of social responsibility and flexibility) and reliability

characterized by a generally high level of internal consistency (except for social responsibility and flexibility) and stability (sections 4.5 and 4.6). The fact that the Psychological Health Scale demonstrated the highest degree of construct validity amongst the inventory scales (subsection 4.5.2.12) is an important finding when one notes that all of the personality scales (with the exception of flexibility) demonstrated a moderately high to high correlation with it; this is one indication that the personality factors involved are good correlates of psychological well-being (subsection 4.3.1.4). Furthermore, the Psychological Health Scale and most of the other personality scales were successful in making fine and significant differentiations between various levels of psychological health (subsection 4.5.4). These results imply that the concept and its factorial components are doing what they were intended to do (i.e., describe psychological well-being). Although the results indicated significant differences between males and females and between older and younger individuals on a few of the factors (subsection 4.3.1.4), it might be more realistic to think of different optimal levels of these factors for males and females at different periods of life. With regards to gender differences, Coan (1974, p. 187) concluded from his findings that "what is optimal or the average for one sex will differ from what is optimal or the average for the other" (the same applies to age differences as well). This implies that these components assume different dimensions and values with varying levels of importance for overall psychological well-being due to gender and age factors. Although some of these factorial components are more powerful than others (sections 4.4, 4.5 and 4.6) and assume different proportions and values due to the interaction of various contributing factors (subsection 4.3.1.4),

psychological well-being is a complex and interrelated tapestry of all these major components. Lastly, it was revealed (subsection 4.3.2.3 and section 4.6) that all of the factors involved, except for social responsibility and flexibility, are not difficult to assess based on the way they were defined (i.e., the definitions are operational and straightforward). Therefore, it can be concluded that the concept as a whole and most of its factorial components, as conceptualized in the present study, represent a valid, reliable, operational and potentially useful framework for viewing and describing psychological well-being.

In conclusion, the present findings suggest that the psychologically healthy individual is one who (most of the time and in most situations) possesses positive self regard, is independent, assertive, can withstand and cope well with stress, is self-actualizing and fairly happy; these individuals are capable of engaging in mutually satisfying social relationships and are good reality testers and problem-solvers for the most part. Moreover, the results indicate that the more healthy individuals possess a greater degree of each of these factors (subsections 4.3.4, 4.5.3 and 4.5.4). However, in spite of the fact that the thrust of the present study was to view psychological well-being as a function of the degree of these personality factors in a linear fashion, it is probably more logical to consider optimal levels and ranges. For example, irrespective of the very strong possibility that a high psychological health score on the inventory indicates above average psychological health, one can imagine pathological conditions associated with extremely high degrees and exaggerated forms of almost all of these factors (e.g., megalomania is an exaggerated form of positive self regard,

extremely high degrees of stress tolerance are often seen in psychopathy, aggressive people are also very assertive, and the ultimate or extreme form of independence is autism). Future research designed to extensively and intensively study clinical populations must address itself to such questions.

5.2.2 An in depth view of each factorial component

The purpose of this subsection is to discuss the relative strength and nature of the individual factors that emerged. This will reveal to what extent they are valid components, correlates and indicators of psychological well-being. Here again, it is important to point out that the relative strength and importance of a factor or a particular conceptual component of a factor is related to "research methodology" and the "psychometric properties" of the experimental inventory involved in addition to and together with the conceptual nature of psychological well-being.

5.2.2.1 Self regard: Self regard emerged as one of the more clearly formed and structured factorial components of psychological well-being (subsection 4.4.2.4). A high correlation was demonstrated between the Self Regard Scale and the Psychological Health Scale (subsection 4.3.1.4) which further indicates the importance of this factor within the general conceptual context of psychological well-being. The Self Regard Scale demonstrated a moderately high level of validity (section 4.5) and exhibits no significant socially desirable response bias (subsection 4.3.1.4); thus, it can be considered to be a valid psychometric representation of the self regard factor. It also demonstrated very high

internal consistency and stability over time (subsections 4.6.1 and 4.6.2). Based on the way in which it was operationally defined (subsection 2.3.3.1), this factor is fairly easy to assess (subsection 4.3.2.3); furthermore, the Self Regard Scale was quite successful in discriminating between different levels of psychological health (subsection 4.5.4), which indicates potential applicability in the clinical setting. These findings confirm Jahoda's earlier emphasis on the importance of this factor as one of the key components of psychological well-being (1958). Males appear to have a significantly higher level of self regard than females (subsection 4.3.1.4) based on the sample studied.

Self regard is comprised primarily of the ability to respect and accept oneself (subsection 4.4.1.3) which was suggested by Jahoda (1958). Respecting oneself is essentially liking the way one is (subsection 4.4.1.3). Self-acceptance is the ability to accept the perceived positive as well as negative aspects of one's body- and self-image with no major difference between the two (subsection 4.4.1.3)--i.e., "accepting both the limitations and possibilities that are found within oneself" (Jahoda, 1958, pp. 22-25). This includes the ability to accept the way one feels about oneself in general with no real difference between accepting specific feelings such as sadness, fear, anger or sexuality (subsection 3.7.4.1). An additional aspect of this factor, possibly secondary to and/or included in the two primary components mentioned above, is the ability to view oneself as basically good (subsection 4.4.1.3). The results confirm the way in which this factor was more or less conceptualized by Maslow (1950) and Mayman (1955) and, especially, Jahoda (1958). Furthermore, there is agreement between these findings and those of Grinker (1962, 1963 & 1974) regarding the

overall importance of this factor for psychological health.

Self regard is associated with general feelings of security, self-assuredness and self-confidence as well as with feelings of self-adequacy (subsection 4.5.2.1) as was suggested by Jahoda in 1958. These results confirm Offer's findings (1972, 1974 & 1975) which demonstrate that the feeling of "self-assurance" is an important component of psychological health. It may be that feeling sure of oneself is dependent upon self-respect and self-esteem which was also suggested by Jahoda (1958) and Beiser (1971). At the opposite end of the continuum are feelings of personal inadequacy and inferiority (subsection 4.5.2.1). Positive self regard is also noticeably associated with assertiveness (subsection 4.4.1.3); self-confidence is apparently the connecting link between the two. A healthy sense of self regard in general is most likely an important prerequisite of assertiveness; it is difficult to imagine a truly assertive person who does not possess self-confidence in addition to basic self-respect and self-acceptance. This factor is also correlated with the stress tolerance factor which suggests that the ability to cope well with stress is based, to a certain extent, upon a healthy sense of self regard. Lastly, the results also suggest a connection between self regard and self-actualization which could mean that self regard is an important prerequisite for self-actualization as well (i.e., one must respect, accept and feel sure of oneself in order to be self-actualizing), self-actualization contributes to feeling good about oneself and/or self-actualizers simply possess good self regard as was suggested by Maslow (1950, 1951, 1954 & 1976).

5.2.2.2 Interpersonal relationship: This factor has emerged as one

of the least clearly structured (formed) factorial components of psychological well-being (subsection 4.4.2.4); this is partly do to the fact that the factor contains two distinctly different and separate components--i.e., (a) the ability to establish and maintain social contacts and (b) the capacity for mutually satisfying and intimate relationships. However, the scale designed to examine this factor demonstrated a moderately high correlation with the Psychological Health Scale (subsection 4.3.1.4).

It demonstrated only a moderate level of validity (section 4.5) but a rather high level of stability over time (section 4.6). While the factor is not that difficult to assess (subsection 4.3.2.3) based on the way it was defined, the Interpersonal Relationship Scale proved only partially successful in distinguishing various levels of psychological health (subsection 4.5.4). More succinctly, it can discriminate between below average and average and between below and above average levels of psychological health, but it is not successful in distinguishing between the average and above average groups which suggests that it is more sensitive to the psychopathological end of the continuum. Its discriminant validity could have been improved by discarding those items which were least capable of distinguishing between the average and above average health groups.

The results indicate that females consistently have significantly better interpersonal relationships than males in and between the age groups that were tested (subsection 4.3.1.4). This confirms Coan's findings (1974 & 1977) which also indicated that women are more "person-oriented" and exhibit more "relatedness to people" than men.

Interpersonal relationship includes (subsection 4.4.1.3) the

ability to establish and maintain relationships (as suggested by Phillips in 1967, McAllister in 1968 and Silverman in 1970) which are mutually satisfying (as suggested by Conrad in 1952 and by Phillips in 1967) and characterized by giving and receiving affection and intimacy (as suggested by Maslow in 1954, Ginsburg in 1955, Luborsky in 1962, Beiser in 1971 and Johnson in 1981). There is a fairly clear difference between the ability to establish and maintain social contact on the one hand and the capacity for mutual satisfaction and intimacy on the other (subsection 4.4.2.4). Mutual satisfaction suggests a meaningful interchange in social relations which is potentially rewarding and enjoyable. This involves giving and receiving warmth and affection and the ease of conveying intimacy to another human being. The results in the present research confirm the way in which Jahoda conceptualized this aspect of "environmental mastery" which is a key component of "positive mental health" (1958). Grinker's results (1962, 1963 & 1974) also suggested that healthy people are able to establish and maintain warm and affectionate human relationships. Similar results were received by Offer as well (1972, 1974 & 1975) which clearly link these particular aspects of interpersonal relationship with psychological well-being. Furthermore, it is interesting to note that Coan's results (1974 & 1977) point to the existence of two factors (of a social relationship nature) related to psychological well-being which he labelled "extraversion" and "a sensitive concern for others"; the sub-factor "split" (into two factorial components) in the present research confirms Coan's findings in which two separate factors emerge.

This factor is not only associated with the "desirability" of establishing friendly relations with others but with the ability "to feel

at ease and comfortable" in such relations and to possess "positive expectations" concerning communication and social intercourse (subsection 4.5.2.2). The interpersonal relationship factor is moderately correlated with the social responsibility factor (subsection 4.3.1.4), which was expected. However, it is more highly associated with the happiness factor which may mean that healthy interpersonal relationship is a prerequisite for happiness, that the feeling of happiness often takes place within a social context and/or is shared in the interpersonal setting. The connection between these two factors was earlier suggested by Jahoda in 1958 (subsection 2.2.2.2).

5.2.2.3 Social responsibility: Social responsibility emerged as one of the weakest factors of psychological well-being with respect to factorial structure (subsection 4.4.2.4). Coan (1974 & 1977) also identified a relatively weak factor related to psychological well-being that he labelled "responsibility". In spite of this, the Social Responsibility Scale demonstrated a moderately high correlation with the Psychological Health Scale (subsection 4.3.1.4). It has demonstrated one of the lowest degrees of validity (section 4.5) and one of the highest levels of socially desirable response bias (subsection 4.3.1.4) meaning that its success in tapping the proposed construct of social responsibility is questionable. On the other hand, it is fairly reliable, demonstrating a high level of stability over time (subsection 4.6.2). In addition to being one of the most difficult factors to assess (subsection 4.3.2.3), it is only partially effective in distinguishing between various levels of psychological health (subsection 4.5.4); although it was able to successfully discriminate between below average and average psychological

health and between below and above average, it failed to distinguish between average and above average health suggesting that it is more sensitive at the psychopathological end of the continuum. Females demonstrated a significantly greater degree of this factor than males (subsection 4.3.1.4), which suggests that they are more responsible than their male counterpart; this also confirms Coan's findings (1974 & 1977).

The results (subsection 4.4.1.3) indicate that social responsibility is comprised of the ability to (a) demonstrate social responsibility (i.e., to act in a responsible manner even though one may not benefit personally) and, especially, to (b) experience oneself as a cooperative, contributing and constructive member in one's social group. The first conceptual component includes demonstrating social consciousness and concern by taking on socially oriented responsibilities and behaving responsibly (as was suggested by Alonso in 1961 and by Saul and Pulver in 1965). The second conceptual component relates to doing things for and with others in one's immediate familiar and social environment (as suggested by Saul and Pulver in 1965 and Phillips in 1967). The results shed empirical light on the way in which Rollo May conceptualized this aspect of psychological well-being in 1954 (conveyed by such terms as "an experience of community").

In addition to the acceptance of others and cooperation with them, this factor is associated with the concept of social consciousness and dependability (subsection 4.5.2.3). As such, the present findings are similar to those of Grinker (1962, 1963 & 1974)--i.e., he showed that psychologically healthy people possess "high degrees of ethics and morality." Offer also concluded from his research that these people "act in accordance with their conscience" and "exhibit few superego problems"

(1972, 1974 & 1975). However, the present results support a broader approach to social responsibility [similar to that of Adler (1939) and May (1954)] than the Freudian concept of "superego".

The social responsibility factor has a moderate correlation with reality testing (subsection 4.3.1.4) which is interesting in that both factors have demonstrated the highest levels of social desirability response bias; this suggests that one of the connections between the two may be their strong social desirability characteristic (i.e., evidently it is very important for human beings to behave in socially acceptable ways which do not transgress emotional, social and legal boundaries). Although its degree of association with the interpersonal relationship factor is not strong (subsection 4.3.1.4), it nevertheless cannot be ignored in light of the original decision to split the larger interpersonal factor into a general interpersonal relationship and a more specific factor of social responsibility (subsection 2.3.1). However, it is felt that this moderate correlation does not justify the collapsing of the two factors into one (i.e., recombining them); they are evidently tapping different social aspects of psychological well-being.

In spite of this factor's empirical shortcomings in the present research, clinical experience testifies to its diagnostic value especially in assessing disturbances of "superego development" such as psychopathy. Therefore, future research should definitely consider reconceptualizing and operationally redefining this construct; its structural properties and validity will then have to be reexamined using more appropriate external criteria of the construct.

5.2.2.4 Independence: Independence emerged as one of the more

clearly structured factorial components of psychological well-being (subsection 4.4.2.4). Moreover, the Independence Scale exhibited a moderately high correlation with the Psychological Health Scale (subsection 4.3.1.4).

The scale demonstrated a moderate level of validity (section 4.5) but a fairly high degree of reliability (subsection 4.6.1) marked by high consistency and stability. The findings suggest that it is not a difficult factor to assess based on the way it was conceptualized (subsection 4.3.2.3). This scale also proved to successfully distinguish between various levels of psychological health (subsection 4.5.4). These results confirm Jahoda's strong emphasis on this factor (which she referred to as "autonomy") as one of her six components of "positive mental health". The results suggest that men tend to be significantly more independent than women (subsection 4.3.1.4). Coan also concluded from his results (1974 & 1977) that men "tended to emphasize independent and individual action."

Independence is comprised of the ability to be self-directed and self-controlled in one's <u>thinking</u> and <u>action</u>, with no apparent difference between its cognitive and behavioural aspects (subsection 4.4.1.3). This confirms the way in which Foote and Cottrell conceptualized independence in 1955 (i.e., the ability of being self-directed and self-controlled in one's action). Another important aspect of this factor is the ability to be free of emotional dependency upon others (subsection 4.4.1.3), which supports to some degree the way in which Luborsky (1962) conceptualized it (i.e., "the ability to function autonomously versus the need to be protected and supported"). The cognitive aspect implies relying on oneself for planning and making important decisions in one's life, the

behavioural component of the factor relates to a way of behaving which is self-determined, and the emotional aspect is essentially the ability to avoid clinging to others in order to satisfy one's emotional needs. Those aspects of the present findings related to the emotional component of independence represent an extension of Jahoda's earlier thinking that regarded this factor as essentially a self-directed decision-making process resulting in independent behaviour (1958).

Independence is moderately associated with problem-solving ability, assertiveness and the ability to withstand and cope with stress (subsection 4.3.1.3)--i.e., it plays an important role in each of these other factors and they, in turn, rely on a healthy level of independence. This inter-correlation of factors was also observed by Wright (1971) in his Factor III which was composed of Jahoda's "personality integration" (i.e., stress tolerance and flexibility) and "autonomy" components. It would be interesting to ponder the potential positive effects on one's problem-solving ability, assertiveness and ability to cope with stress by improving the general level of independence and vice versa.

5.2.2.5 Flexibility: Flexibility emerged as one of the least clearly structured factorial components of psychological well-being (subsection 4.4.2.4); and the Flexibility Scale demonstrated the lowest degree of inter-correlation with the other scales and has the lowest correlation with the Psychological Health Scale (subsections 4.3.1.4). These results are similar to those of Coan (1974 & 1977) who identified three similar factors (i.e., "spontaneity", "openness" and "liberalism") which also emerged as rather weak components of psychological well-being. The Flexibility Scale demonstrated a low to moderate level of validity

(section 4.5) and only a moderate degree of reliability marked by moderate consistency (section 4.6). It also proved to be one of the most difficult factors to assess (subsection 4.3.2.3) which suggests that it was not that well defined, is difficult to work with and/or is not an easy factor to assess in general. Moreover, it was only partially successful in distinguishing various levels of psychological health (subsection 4.5.4); the scale did discriminate between the below and above average and between the average and above average psychological health groups but not between the below and average groups suggesting that flexibility is more sensitive to above average psychological well-being. It is interesting to note that these results do not support a great deal of earlier thinking that emphasized the importance of flexibility to psychological health--e.g., Barron (1963), Hartmann (1939 & 1947), Kubie (1954), Mckenzie (1968), Scott, (1958), Zinberg (1970). It could be that there is a more significant relation between flexibility and psychological well-being with older individuals as was suggested by Maslow in 1950.

In spite of the above-mentioned shortcomings of this scale, the results (subsection 4.4.1.3) suggest that flexibility is essentially comprised of the ability to adjust one's thinking, feeling and behaviour to changing situations and conditions, with an apparent distinction between cognitive and behavioural aspects thereof (subsection 4.4.2.4). This supports a "combination" of Hinsie and Campbell's definition (1967) with that of English and English (1966) which was presented in subsection 2.3.3.5. The behavioural component of this factor relates to a capacity to alter daily routines in the face of changed and changing conditions. On the other hand, the cognitive component is related to the ability to change one's mind in general when evidence suggests that one is mistaken

(Johnson, 1981), openness in experimenting with new and different ideas, and, more specifically, tolerance of different orientations in the realm of religion, sexuality and politics. This general aspect of being "adaptive" was also demonstrated by Offer (1972, 1974 & 1975) as being linked to psychological well-being.

Flexibility is associated with the ability to situationally react without rigid adherence to principles and the capacity to value flexibility in general (subsection 4.5.2.5); it is also associated with the ability to be synergistic and to transcend dichotomies.

Based on the results of the present study, the importance and usefulness of the flexibility factor is questionable. With respect to these findings, it is interesting to note that Jahoda (1958) did not single it out as a specific component of psychological well-being but suggested that the degree of flexibility is one possible indication (together with the tolerance, control and expression of stress and anxiety) of "integration of personality" (a rather heterogeneous component of "positive mental health"). Future research should consider reconceptualizing and operationally redefining flexibility and then to reexamine its structural properties and validity with more appropriate external criteria. If future results reconfirm the present results, it will be justified to discard it as an important and useful factorial component of psychological well-being.

5.2.2.6 Problem-solving: Problem-solving emerged as one of the more clearly structured factorial components of the concept of psychological well-being (subsection 4.4.2.4), which is interesting in light of its heterogeneous nature. The Problem-solving Scale was highly correlated

with the Psychological Health Scale (subsection 4.3.1.4). This scale demonstrated a moderate level of validity (section 4.5) but a fairly high degree of reliability marked by high consistency and stability (section 4.6). Although problem-solving ability is apparently not difficult to assess (subsection 4.3.2.3), it was only partially successful in distinguishing between different levels of psychological health (subsection 4.5.4). It discriminated between below average and above average and between average and above average psychological health, but was unsuccessful in significantly distinguishing between the below average and average groups; this suggests that this factor is more sensitive to above average psychological well-being, which is not surprising when it is recalled that Jahoda considered it to be one of the basic aspects of "environmental mastery" which is one of her six components of "positive mental health" (1958). These results confirm earlier thinking suggesting that "normal and mentally healthy people are more efficient in meeting environmental demands and solving problems" (i.e., Wishner, 1955) and that "mental illness is the inability to learn and solve problems" (Silverman, 1970). Future research should select more appropriate external criteria in order to more appropriately examine its construct validity. Furthermore, discriminant criterion-related validity could be improved by discarding those items which fail to significantly discriminate between below average and average psychological health.

Problem-solving is multi-phasic in nature and includes (subsection 4.4.1.3) the ability to go through a process of (a) being aware of the problem and intending to deal with it (i.e., thinking about the problem as well as feeling sure of oneself and motivated in approaching it effectively), (b) defining and formulating the problem as

clearly as possible (i.e., gathering relevant information and adopting a systematic approach), (c) generating as many solutions as possible (i.e., similar to "brainstorming"), and (d) making a decision as to the implementation of one or the other of the considered solutions (i.e., weighing the pros and cons of each possible solution and then deciding on the best course of action). These findings confirm Jahoda's conceptualization of this factor (1953 & 1958) and support the results of research carried out by D'Zurilla and Goldfried (1971). Furthermore, it is interesting to note that Coan's factor analytic study of psychological well-being (1974 & 1977) indicated the existence of three factors which are similar to one another (i.e., "general intelligence", "analytic orientation", "ideational fluency") and to some of the sub-components of the factor that emerged in the present study.

Problem-solving is associated with being conscientious and disciplined and systematically persevering in approaching problems; it is also associated with a desire "to do one's best" (subsection 4.5.2.6). These findings are similar to those of Grinker (1962, 1963 & 1974) who demonstrated that healthy people actively "do something about problems". The present results also confirm those of Offer (1972, 1974 & 1975) who found that healthy people are "successful in coping with problems". The Problem-solving Scale was moderately to highly correlated with the Reality Testing and Stress Tolerance Scales suggesting that all three factors have something in common (subsection 4.3.1.4). Healthy problem-solving most likely is dependent upon good reality testing throughout the entire process allowing for a successful, appropriate and realistic resolution. And both reality testing and stress tolerance rely on a similar type of process-oriented behaviour which increases the possibility of successfully

achieving and maintaining healthy reality contact and weathering stressful situations respectively. Furthermore, this type of factor inter-correlation was also observed by Wright (1971) in his Factor I which was labelled Task and Perceptual Effectiveness and composed of both problem-solving and reality testing elements.

5.2.2.7 Assertiveness: Assertiveness emerged as one of the more clearly structured factors (subsection 4.4.2.4). The Assertiveness Scale demonstrated a high correlation with the Psychological Health Scale (subsection 4.3.1.4). It demonstrated fairly good validity (section 4.5) and good reliability marked by high consistency and stability (section 4.6). It proved to be one of the easiest factors to assess (subsection 4.3.2.3); one's degree of assertiveness is not only visible to others but people are very much aware if they are assertive or not (subsection 4.3.2.3). The Assertiveness Scale is also very successful in distinguishing various levels of psychological health (subsection 4.5.4). Based on the sample tested, males appear to be more assertive than females (subsection 4.3.1.4).

The findings (subsection 4.4.1.3) suggest that assertiveness is comprised of three basic components: (a) the ability to stand up for personal rights (i.e., not allowing others to bother or take advantage of one); (b) the ability to express thoughts and beliefs openly (i.e., being able to voice opinions and disagree, and to take a definite stand even if one has something to lose by doing so); and (c) the ability to express feelings (e.g., to accept and express anger and sexual feelings). It is more difficult to express one's feeling than to express one's ideas or to stand up for personal rights; one's ability to be

assertive is often a function of what is being expressed and to whom (subsection 4.3.2.3). The results empirically support the basic way in which assertiveness has been conceptualized by a number of theorists in the past (e.g., Albert & Emmons, 1974; Cotler & Guerra, 1976; Galassi & Galassi, 1977; Lange & Jakubowski, 1977). Furthermore, these results confirm those of Offer (1972, 1974 & 1975) who also empirically demonstrated that the "ability to express emotions" is an important part of psychological health.

Feeling sure of oneself in relating with others and confronting various situations in life is highly associated with assertiveness (subsection 3.7.4.7), possibly synonymous with it and/or assumed to be an integral part of the factor. This is probably why assertiveness demonstrates a moderate degree of association with the self regard factor. It is also highly associated with independence. This could mean that the ability to be assertive depends on a healthy sense of self regard and independence; or put another way, it is difficult to be assertive if one is not independent and does not possess positive self regard. It could also be that being more assertive enhances one's self regard and feeling of independence. Assertiveness is also moderately correlated with self-actualization (subsection 4.3.1.4) which suggests that the latter is dependent upon the former, that one has to be assertive to actualize one's potentialities, and/or self-actualizing people tend to be assertive.

5.2.2.8 Reality testing: Reality testing emerged as one of the least clearly structured and formed factors (subsection 4.4.2.4), probably because of its heterogeneous nature (subsection 2.3.3.8). This is in contrast to the results of Coan's factor analytic study (1974 & 1977)

which indicated the emergence of a factor (i.e., referred to as "acceptance") that proved to be more clearly structured. It is thought that the difficulty encountered in operationalizing this factor (subsections 2.3.2 and 3.7.5) had an ill effect on item generation and selection decreased the commonality of the items thus decreasing the internal consistency of the scale (future research of this construct should attempt to create a clearer operational definition). In spite of this, the Reality Testing Scale demonstrated a high correlation with the Psychological Health Scale (subsection 4.3.1.4); and it exhibited fairly good validity (section 4.5) and reliability marked by a moderately high level of stability (section 4.6). It demonstrated the second highest level of social desirability response bias (subsection 4.3.1.4) meaning that it is contaminated by social desirability suggesting that healthy reality testing is perceived of as a desirable social attribute; this situation could be improved in the future by selecting items which exhibit low correlation with a criterion or criteria of social desirability (e.g., the Faking Good Scale). In spite of the way in which it was conceptualized and operationally defined, reality testing did not prove to be a difficult factor to assess by the other-observers (subsection 4.3.2.3). This scale also proved to successfully distinguish between various levels of psychological health (subsection 4.5.4). This is an interesting finding in light of the great deal of theoretical and clinical importance which has been attached to this factor for many years (subsection 2.3.3.8). The findings indicated that older individuals appear to be better reality testers than younger ones (subsection 4.3.1.4). Perhaps the progressively wider exposure to life experience that accompanies the developmental process brings the way in which one

perceives oneself and the world into sharper focus and allows for a more realistic perspective. The results also suggest that male subjects tend to be better reality testers than their female counterparts (subsection 4.3.1.4); this complements Coan's findings (1974 & 1977) that indicated that men "score higher on reality contact" than women.

According to the results (subsection 4.4.1.3), reality testing is based on the correspondence between what is experienced and what objectively exists on the one hand and the ability to test this correspondence on the other. The essence of this factor (subsections 3.7.4.8 and 4.4.1.3) is this ability to test the degree of correspondence between what one experiences (in general without being specific as to cognitive and perceptual aspects of experience) and between what actually exists. This process of testing what one thinks one is experiencing involves a search for objective evidence to confirm and support those thoughts, feelings and perceptions; this is, essentially, "tuning in" to the immediate situation, attempting to keep things in their right perspective and to experience things as they really are without excessive fantasizing or daydreaming about them. These findings confirm Jahoda's earlier conceptualization of the construct (1950, 1953 & 1958) and support Smith's (1950) and Fromm's (1955) emphasis on objectivity and the adequacy of one's perception as well as Beck's (1979, p. 154) emphasis on "examining and authenticating" one's ideas and thoughts. Offer (1972, 1974 & 1975) also presented evidence suggesting the importance of this "pragmatic" process. An important adjunct in this process is the degree of perceptual clarity evident when trying to assess and cope with specific situations; this involves the ability to concentrate and focus when examining various ways of coping with situations that arise. Lastly,

there is a difference between reality testing on the one hand and accepting reality on the other (subsection 3.7.4.8)--i.e., one's ability to test reality does not assume that one automatically accepts the reality of a specific situation, which is in contrast to how this was conceptualized by Jahoda in 1958 (subsections 2.2.2.2 and 2.3.3.8).

Reality testing is associated with a lack of withdrawal from the outside world, a tuning into the immediate, and lucidity and clarity in perception and thought processes (subsection 4.5.2.8). The Reality Testing Scale demonstrates a moderate correlation with the Problem-solving and Stress Tolerance Scales (subsection 4.3.1.4). All three of these factors, as conceptualized in the present study, are process-oriented constructs that emphasize cognition which may account for the moderately high degree of association between them.

5.2.2.9 Stress tolerance: In spite of its heterogeneous structure, stress tolerance emerged as one of the more clearly structured factorial components of the concept (subsection 4.4.2.4). The Stress Tolerance Scale was also highly correlated with the Psychological Health Scale (subsection 4.3.1.4). It demonstrated good validity (section 4.5) and reliability (section 4.6) with a very high level of consistency and a fairly high degree of stability. The ability to withstand stress is not difficult to assess (subsection 4.3.2.3). It also proved to be very successful in distinguishing various levels of psychological health (subsection 4.5.4). This confirms Jahoda's earlier thinking that the ability to tolerate stress and control anxiety is one of the more important indicators of "personality integration" and, hence, "positive mental health" (1958). These results also confirm those of Vaillant

(1971, 1975, 1976 & 1977) who extensively and intensively researched the connection between successful and effective adaptation to life and the employment of mature ego defense mechanisms; he also found a rather strong correlation between the choice of defensive styles, the level of adult adjustment and psychopathology (subsection 2.2.2.5). The results indicate that males consistently cope better with stress than females in and between the age groups tested (subsection 4.3.1.4). Coan reported similar findings (1974 & 1977) indicating that men demonstrate "greater personal control" than women who experience "more subjective distress"; he suggested that this was the case perhaps because men "had a greater need to maintain a self-image of mastery." These are interesting findings when one notes the higher proportions of females who suffer from disturbances of anxiety (e.g., neuroses) which has consistently been revealed and confirmed in epidemiological studies over the years (Kaplan et al., 1980, p. 1484). Thus, the results of Coan's study and the present research offer a viable aetiological explanation for the higher prevalence of manifest anxiety amongst females (i.e., their higher manifestation of anxiety is partly related to less efficient modes of stress tolerance and coping behaviour).

Stress tolerance is basically (subsection 4.4.1.3) the ability to withstand adverse events and stressful situations without "falling apart" (i.e., not getting so overwhelmed that performance is drastically and dramatically ill effected); this empirically supports a great deal of earlier theoretical work and research findings (e.g., Allinsmith & Goethals, 1956; Bower, 1960; Janis, 1956; Jahoda, 1958; Meichenbaum, 1977; Scott, 1958; Seligman, 1975). This ability is based on (a) a capacity to chose various courses of action for coping with stress (i.e., being

resourceful and effective, being able to come up with suitable methods, knowing what to do and how), (b) having an optimistic orientation toward new experiences and change in general and towards one's ability to successfully overcome the specific problem at hand (i.e., a belief in one's ability to face up to these situations and handle them) and (c) a feeling that one can control or influence the stressful situation (i.e., keeping calm and maintaining control). This factor appears to be synonymous with what has been referred to as "ego strength" and "positive coping". These results confirm those of Grinker (1962, 1963 & 1974) who found that psychologically healthy people are better "able to use coping devices" and "put the emphasis on control", which results in only "mild anxiety responses" from time to time and "less neurotic traits" than others. Offer (1972, 1974 & 1975) also found that healthy people are better able to cope "without being overwhelmed or acting-out" and do not experience "prolonged periods of anxiety." These results are very similar to those of Kobasa's research (1977, 1979 & 1982) with respect to the various ways in which one successfully and effectively copes with stress. With specific regard to having a greater repertory of suitable responses, the present results also support conclusions reached by Hamburg and Adams (1967), Offer (1973) and Offer and Sabshin (1974, p. 95). The present findings also confirm conclusions reached by Seligman (1975) with respect to the importance of feeling that one is in control in stressful situations and does something about it versus feelings of "helplessness" and "hopelessness".

Stress tolerance is highly associated with a general trait of being relaxed, composed and tranquil and with the ability to calmly face difficulties and not being carried away by strong emotions (subsection

4.5.2.9). This factor demonstrated a moderate to moderately high association with reality testing and problem-solving (subsection 4.3.1.4). Reality testing would appear to be a common element in both healthy and efficient problem-solving and stress tolerance. These findings support the theory that stress tolerance is "a type of immediate problem-solving" in anxiety-provoking situations as was previously suggested by Lazarus et al. (1974) and by Meichenbaum (1977, p. 195).

5.2.2.10 Self-actualization: Self-actualization emerged as one of the more clearly structured factorial components of the overall concept (subsection 4.4.2.4). The Self-actualization Scale demonstrated the highest degree of inter-correlation with other scales and the highest correlation with the Psychological Health Scale (subsection 4.3.1.4). It demonstrated a moderate level of validity (section 4.5) and a high degree of reliability (section 4.6) marked by very high consistency and high stability. The factor proved to be fairly easy to assess (subsection 4.3.2.3); individuals are also quite aware of the degree to which they are or are not self-actualizing. It also proved to be a very powerful indicator of the general level of psychological health (subsection 4.5.4). These results not only confirm Jahoda's earlier emphasis on the important relationship between self-actualization and "positive mental health" (1958), but they also support earlier findings that clearly indicate the ability of this factor to distinguish between various levels of psychological health (e.g., Knapp, 1965; McClain, 1970; Shostrom, 1974; Zaccaria & Weir, 1967).

It is interesting to note that the present results support those of Maslow's (1950, 1951, 1954 & 1976) in-depth phenomenological study of

this factor. In spite of the fact that Maslow conceptualized a much broader construct (subsection 4.5.2.10) and employed a very different research methodology (subsection 2.2.2.1), similar findings were obtained. For example, the results (subsection 4.4.1.3) indicate that self-actualization is a general striving to actualize one's potential capacities (i.e., an attempt to develop and expand those activities that one enjoys), which is a life-long effort (i.e., a conscious effort to make one's life as meaningful as possible) and is characterized by being involved in various interests and pursuits and being committed to purposes and goals which lead to a meaningful, rich and full life (i.e., being enthusiastic with respect to one's major involvements). Jahoda also emphasized an on-going and dynamic process of striving towards maximum development and the realization of one's potentialities (1958). This also confirms the way in which this factor was defined by English and English (1966) with respect to an on-going "process of developing one's capacities and talents." Conrad (1952), Mayman (1955) and Strupp and Hadley (1977) also discussed the working toward goals and the search for a richer and more meaningful life. The present results confirm those of Offer (1972, 1974 & 1975) which indicate that this on-going process that results in continual growth and the leading of a meaningful and fulfilling life is an important component of psychological well-being. A strong element in this factor which emerged from the present findings (subsection 4.4.1.3) is the importance of stable persistence of one's interests (i.e., doing what one wants to do, can do and enjoys doing).

The Self-actualization Scale demonstrated a moderate to high correlation with the Self Regard, Happiness and Problem-solving Scales (subsection 4.3.1.4) which suggests that self-actualizing people are good

problem-solvers, possess positive self regard and are happy people for the most part. This supports part of Maslow's description of self-actualizing individuals, whom he described as "self-accepting" and "problem-centered" amongst other things (1950, 1951, 1954 & 1976). These results were also similar to those of Shostrom's research (1964) who confirmed Maslow's findings with respect to self regard--i.e., a strong correlation between self-actualization and self-acceptance. Moreover, a similar type of factor inter-correlation was observed in Wright's Factor IV (Openness) which was composed of self-actualization and self regard components.

5.2.2.11 Happiness: Happiness emerged as the most clearly structured and defined factorial component of the concept of psychological well-being (subsection 4.4.2.4). This is partly explained by the very homogeneous nature of the definition and scale which is composed of similar types of items. The results are in contrast to Coan's results (1974 & 1977) which indicated the existence of three similar but separate and rather weak factors which he labelled "self-satisfaction", "optimism" and "distress proneness"; this may very well be do to the fact that he factor analysed many different types of items which were related to this construct. The Happiness Scale was highly correlated with the Psychological Health Scale (subsection 4.3.1.4). This scale demonstrated the highest level of validity (section 4.5) as well as very good reliability (section 4.6) marked by very high consistency and high stability over time. The results indicate that the factor is fairly easy to assess (subsection 4.3.2.3). The Happiness Scale also proved to very successfully distinguish between different levels of psychological health (subsection 4.5.4). This strongly supports earlier suggestions that happiness is not only a most

valuable ingredient of psychological health (Alonso, 1961, pp. 21-25) but it may also prove to be an important measure of one's overall degree of well-being (Bradburn, 1969; Phillips, 1967; Scott, 1958).

Happiness (subsection 4.4.1.3) is the ability to feel satisfied with and enjoy various aspects of one's life (i.e., the general ease with which one can and does enjoy life and feel good in both work and leisure) and the ability to play and have fun. The second conceptual component of this factor is, essentially and simply, the ability to "let one's hair down", to enjoy the opportunities for having fun, to feel light, and to be able to smile and laugh. The present findings related to the first conceptual component confirm earlier theoretical work of Alonso (1961, pp. 21-25), James and Jongeward (1977), Johnson (1981), Ostow and Cholst (1974) and Scott (1958); the results related to the second component support the thinking of mental health theorists like Conrad (1952), Ginsburg (1955, pp. 7, 21) and Blau (1954).

The factor is associated with a general feeling of cheerfulness and enthusiasm and the absence of persistent dysphoric mood (subsection 4.5.2.11). This confirms Grinker's (1962, 1963 & 1974) and Offer's (1972, 1974 & 1975) findings who also demonstrated that psychologically healthier people are more content and experience no prolonged periods of depression and manifest only mild depressive traits from time to time. The Happiness Scale demonstrated a moderate to moderately high correlation with the Self Regard, Self-actualization and Interpersonal Relationship Scales (subsection 4.3.1.4). This suggests that happiness may be a "by-product" of healthy levels of self regard, interpersonal relationships and self-actualization (i.e., enjoying oneself, others and what one likes to do). This confirms Jahoda's thinking (1958) that successful

"environmental mastery" (of which interpersonal relationship is one important component) leads to "general contentment and happiness" which are, thus, indicative of "positive mental health".

The above-mentioned findings suggest the importance of this factor for describing psychological well-being. It appears to be a good "barometric" indicator of one's general level of psychological health which has been suggested by a few mental health theorists for some time. Thus, according to the present results, the best way of ascertaining how psychologically healthy a person is is simply to ask him or her to what extent he or she feels happy or unhappy most of the time and in most situations (i.e., this is based on the content of an item that demonstrated the highest item-scale correlation for this most powerful factor).

5.3 A GENERAL SUMMARY OF THE PRESENT STUDY VIEWED IN RELATION TO THE MENTAL HEALTH LITERATURE

By comparing the methodology and the results of the present study with those of some of the major contributors to this field, both advancements as well as limitations become apparent. In this section, a number of points of comparison will be made between the writer's work and that of Maslow, Jahoda, Grinker, Offer, Vaillant and Coan (subsection 2.2.2).

The present study did not adopt a purely "confirmatory" approach like that of Vaillant who set out to confirm a (psychoanalytic) theory of what psychological well-being is based on (i.e., an efficient employment of mature ego defense mechanisms), nor was it "exploratory" like that of

Grinker, Offer and Coan who explored psychological health without a preconceived idea of which factors contribute to it. Although the latter approach is better than the former for gaining a more extensive understanding of this particular field (especially in the initial stages of "mapping out the area"), their research terminated after revealing a number of key factors--i.e., there was no attempt to statistically validate them or explore their nature in any great depth. The writer combined both approaches (exploratory and confirmatory). His initial exploratory phase was very similar to Jahoda's non-statistical exploration of this area (i.e., various theories and research findings were reviewed, the main aspects were summarized and then logically clustered into a few basic common factors). The writer's confirmatory stage was the experimental and statistical phase of his research which attempted to confirm their existence and validate them as factors. Although this combined approach is more thorough than those adopted by the researchers cited above, an even more thorough approach would have been to combine an in-depth review and summary of the literature with an intensive empirical and an extensive phenomenological exploration of the area and then to statistically attempt to confirm and validate the relevant factors involved (i.e., those that surface in the exploratory phase); a logical continuation of this confirmatory stage would be an in-depth phenomenological study of the confirmed and validated factors in order to gain a deeper understanding of them. This combination of empirical and phenomenological research approaches has been successfully employed by Wong (1975). This integration of different methodologies could generate a tremendous amount of insight into the nature of psychological well-being; greater progress in the area of psychological health can be made if such a

balanced relation between qualitative and quantitative approaches is employed (Giorgi, 1970, p.66).

An additional advantage of the writer's approach was that it was eclectic in nature (i.e., it made use of many different theories, research methodologies and findings). This same approach was also adopted by Jahoda, Grinker, Offer and Coan. On the other hand, approaches that are not eclectic (like that of Vaillant) tend to limit the researcher from the onset to stay within the boundaries of his or her theoretical framework (i.e., they tend to place theoretical limitations on the way in which research is conducted and the interpretation of the results that are received).

The present study joins the ranks of other studies which have attempted to develop concepts of psychological well-being out of empirically-oriented research (subsection 2.2.1.4). This approach has been adopted by Grinker, Offer, Vaillant and Coan (in contrast to Maslow's method which was primarily qualitative and impressionistic).

Additional advantages and advancements made by the present study in comparison with other contributions that have been made in this field can be seen in the general level of research sophistication. This is observed in the sampling procedures employed, the nature of the sample selected and studied, the method of data collection, and the way in which the data was statistically examined.

The writer focused on a fairly homogeneous population (i.e., white English-speaking South African first year university students); the vast majority of this particular population at Rhodes University was systematically approached and sampled (subsections 3.7.1, 4.3.1, 4.3.2

and 4.3.3). This rendered a rather large sample (300) which was representative of the target population and included a fairly equal gender breakdown of 47 % males and 53 % females ranging from late adolescence to early adulthood. The sampling method which was adopted was similar to Grinker's and Offer's rather systematic and thorough procedure; however, both of these researchers employed a more rigorous screening system of tests, questionnaires and other-observer ratings. Such procedures are radically different from those employed by Maslow who selected subjects based on "his personal admiration and respect" for them, "some" of whom were further screened by the administration of the Rorschach (subsection 2.2.2.1). Coan also studied a rather large sample of 361 male and female young adult university students. However, Grinker, Offer and Vaillant studied smaller samples (65, 73 and 95 respectively) which were composed only of males; Maslow's contemporary subjects numbered only nine, most of whom were middle-aged males (he studied an additional 51 historical figures). Taking into account the diversity of human behaviour within and between males and females at different ages in a particular population, the approach of choice should be to select and study large numbers of both males and females at different ages. Moreover, various social and educational strata within and between different ethnic groups need to be studied in the future. This will make it easier (and more legitimate) to generalize the results.

An important contributing factor behind advances that have been made in the study of psychological well-being is the methodological departure from studying primarily clinical populations, samples and subjects (subsection 2.2.1.1). As a result of this approach, some researchers (e.g., Maslow and Jahoda) have focused more on "above average"

psychological well-being whilst others (e.g., Grinker, Offer and Coan) have studied "average" psychological health. The present study attempted to focus on the full range of psychological well-being from the psychopathological to the eupsychic end of the continuum.

An additional advancement made by the present study was the obtaining of a higher level of operationalization of the overall concept and the specific factors involved. This was systematically developed and examined by various methods (sections 2.3, 3.2, 3.3, 3.7 and 4.3). This is in contrast to Maslow's study which did not set out to specifically operationalize psychological well-being but to reveal and describe various characteristics of "self-actualizers" which were vague at times (e.g., "peak and mystic experiences", "feelings for mankind", "democratic character structure", and so forth). Other than labelling the 19 factors which emerged from his factor analytic study of psychological well-being, Coan made no attempt to operationalize or describe them. Jahoda more fully described her six components of "optimal mental health", two of which were somewhat vague and heterogeneous in nature (i.e., "integration of personality" and "environmental mastery"). Both Grinker and Offer described their findings related to average psychological health without progressing further in the direction of a more comprehensive operational definition of psychological well-being. Vaillant came the closest to the writer's level of operationalization by developing and employing fairly clear and workable definitions of the 18 ego defense mechanisms which he studied.

While the writer's system of data collection was well-developed when compared to the above-mentioned researchers (i.e., a specially constructed inventory, three psychological tests, semi-structured

interviews, other-observer ratings and self-ratings), Grinker's method was more advanced (i.e., each subject was interviewed eight times, submitted three self-ratings, was given three different psychological tests twice and his behaviour was observed and rated by parents, teachers and mental health professionals over a number of years). Vaillant also made use of various methods which included interviews, questionnaires, psychological testing, other-observer ratings as well as life histories and medical examinations. Although Coan used a combination of some 25 different questionnaires and specially constructed inventories, he did not employ interviews, other-observer ratings nor self-ratings. On the other hand, Maslow used primarily unstructured interviews with little consistency between them with respect to the questions which were asked.

With regards to the sophistication of statistical procedures employed in the research of psychological well-being, a progressive advancement is evident from Maslow's and Jahoda's early work in this field to the present study. Both Maslow and Jahoda logically summarized their findings without recourse to statistics at all. Grinker and Vaillant employed semi-quantified methods and very simple descriptive statistics. Although Offer and Coan used more sophisticated statistical methods including multivariate analysis, there was no attempt by either researcher to externally validate the factors that were revealed; moreover, Offer did not describe or even label the factors that emerged in his study. In addition to descriptive statistics, the writer employed multivariate analysis (i.e., item and factor analysis). Moreover, the validity and reliability of the factors that emerged were examined by a number of approaches, these factors were correlated with one another, labelled, described and defined. Lastly, by employing psychometrics and

sophisticated statistical procedures like multivariate analysis in the development of psychological theory, this study was similar to Wechsler's approach to studying human intelligence and that of Cattell and Guilford in personality theory (section 3.1).

The present study, like that of Maslow and Coan, was cross-sectional. On the other hand, Grinker conducted a 14-year follow up (from young to middle adulthood) while Offer and Vaillant carried out longitudinal studies (eight and 30 years respectively). The writer is of the opinion that the method of choice in studying psychological health is longitudinal from early childhood to late middle age with prospective follow-ups every few years. By studying a large population of males and females over a long period of time, one is better able to gain a deeper and wider understanding of psychological health and how it changes over time. Offer and Sabshin (1974, p. 139) have strongly emphasized this approach. However, extraordinarily few in this field of research have committed themselves to follow-up studies of non-clinical populations (Block, 1971; Cox, 1970; Masterson, 1967; Silber et al., 1961; Symonds & Jensen, 1961) let alone longitudinal studies (Beiser, 1971; Hangnell & Ojesjo, 1975; Jones et al., 1971; Kagen & Moss, 1962; Offer, 1973; Offer & Offer, 1975; Vaillant, 1971, 1972, 1974, 1975, 1976 & 1977). Future research in this field should bear this in mind in spite of the very demanding nature of such an approach from the standpoint of the organization, logistics, manpower, time and expense involved.

By focusing on personality factors, the present study has relied on a psychosocial model of psychological well-being which has provided the frame of reference for most of the research, theoretical and clinical work that has been conducted in this area to date. As such, it has fallen

short of the desired biomedical-psychosocial-sociocultural model (subsection 2.2.1.1) partially adopted by a very small minority of researchers like Grinker and Offer who have stressed the importance of an expanded multi-determinant approach to psychological health. Future research should rely more heavily on this more comprehensive model; this would entail including empirical indicants specifically related to physical health and socio-cultural aspects of existence and then examining their structural nature, validity, reliability and general relationship to psychological well-being. An ultimate goal in future research may eventually be to combine the personality predisposition approach with the other predispositions of psychological health (e.g., significant life events and biological determinants) in order to better assess and predict psychological well-being. In light of the fact that such a wide array of correlates, determinants and predictors are intercorrelated and complex, assessment will become more complicated and strain human cognitive capacity. This will necessitate the use of computers. Researchers like Johnson et al. (1978) have already developed limited computerized methods of psychological assessment that have been in operation since the early 1970s. Such methods may not only prove to be much more effective and efficient than conventional methods, but they may eventually succeed in reducing the time and cost of assessment and (indirectly) psychotherapy.

The focus of the present study, like the majority of the researchers cited above, was multi-factorial. The multi-factorial nature of the results once again demonstrate the complexity of psychological well-being and confirm the results of other studies like those of Wright (1971) and of Coan (1974 & 1977) which reveal that this concept is not simply (simplistically) based on any one (unitary) factor

which has often been suggested in the past.

The findings of the present study with respect to the factorial composition of psychological well-being confirm those of the researchers cited above for the most part; the obtaining of similar findings contributes additional validity to the present results. This points to a general consensus as to what the key factors of psychological well-being are. The factor with the least amount of research consensus was assertiveness which was not dealt with by the researchers cited above except for Offer's reference to "the ability to express emotions". The present findings are most similar to those of Offer's research (subsection 2.2.2.4). Two additional factors which were not dealt with in the present study but were revealed by both Grinker and Offer were "impulse control" and the strong correlation between "physical health" and psychological health. Lastly, it is interesting to note that in spite of a very different methodological orientation, there is a fair amount of similarity between the present findings and those of Maslow (subsection 2.2.2.1); once again, this justifies the employment of different research methodologies in studying psychological well-being.

Lastly, the present study has attempted to address the need for adequate and better conceptual models for defining, describing and assessing the full range of psychological health as is expressed in the mental health literature (subsection 2.2.1). As such, it joins ranks with the work of other researchers like Maslow, Jahoda, Grinker, Offer, Vaillant and Coan to mention a few of the most well known contributors to this field of human behaviour.

5.4 THE POTENTIAL APPLICATION OF THE A POSTERIORI CONCEPT

This section will briefly discuss two important possibilities for applying the a posteriori concept which has evolved from the present study. The concept has potential applicability in (1) psychological assessment and (2) psychotherapy. However, from the onset, it is important to stress that the applicability of this way of viewing, describing and assessing psychological well-being will be a function of the extent and outcome of future research.

5.4.1 Applying the concept in psychological assessment

The experimental inventory which was constructed to examine the proposed concept of psychological well-being has demonstrated satisfactory psychometric properties as was revealed throughout Chapter Four. As such, it could eventually be used to assess psychological health in the clinical setting.

The inventory is capable of rendering an overall measure of psychological health in the form of a total score broken down into sub-scores for various personality factors (i.e., analogous to a Full I.Q. score with sub-scores in various areas thought to be major components of general intelligence). This offers a way of assessing not only overall psychological well-being but identifying stronger (or healthier) and weaker (or less healthy) areas in the assessee in relation to others from the same population and/or in relation to the same individual over time. The advantage of employing such a method in psychodiagnostics is that it not only gives a general assessment of psychological health but breaks it down into its essential and important components in order to make a more comprehensive and meaningful evaluation--i.e., it is not sufficient to

simply say that one has "good", "poor" or "average" psychological health but to assess the degree of health and pathology in various key areas. It could be administered by itself or as part of a battery of other psychodiagnostic tests and/or combined with a clinical interview. Its employment could quickly and economically pinpoint specific areas that need to be more fully explored by the psychodiagnostician. This would save valuable professional time in reaching a more accurate evaluation of both strengths and weaknesses in order to assess the need and method of therapeutic intervention. Moreover, the advantage of using this particular type of self-report inventory in this manner is that other inventories are designed to assess either general personality traits or psychopathology and are less specific to the identification and assessment of the key personality factors contributing to one's psychological health. Therefore, they often render results which are not always meaningful nor useful to the clinician. In order to "pinpoint" the key issues in assessment without such an adjunct, several hours of clinical interviewing and/or extensive testing are required.

5.4.2 Applying the concept in psychotherapy

The a posteriori concept could be used in the form of a general theoretical framework as an important adjunct to psychotherapy. For example, various personality factors related to this concept of psychological well-being could be explored by the therapist during the clinical interview in order to gain a fuller understanding of the individual seeking therapy; at a more concrete level, this could be achieved by evaluating and interpreting the inventory scale scores in the form of a "psychodiagnostic profile". The results of both approaches

(i.e., the way in which the individual responds to various aspects of this type of interview or specific scores on the personality scales) would then suggest which areas needs to be focused on more than others in therapy (i.e., therapeutic goals). For example, this type of "intake" could indicate that although Mr. Smith's major problem centers around the way in which he relates to others, he still possesses a very healthy sense of self regard, flexibility and assertiveness which may be very constructively worked with in therapy to overcome the more pathological aspects of his life. Thus, therapeutic goals could be more in keeping with systematically identified deficiencies and strengths and less arbitrary in nature (Offer and Sabshin, 1974, p. 180). At a later stage, progress in therapy could be more easily and accurately evaluated by noting the extent and direction of change made in specific areas (Neulinger et al., 1970). This would not only provide an aid in deciding on when to terminate therapy but also how to more systematically measure the success of the therapy. Quite often psychotherapy is unduly extended because the therapist has not clearly established therapeutic goals. The optimal timing for terminating therapy is often related to this basic lack of clarity. Psychotherapy which is over-extended is costly for the one seeking this service (and verges on the unethical) whilst therapy which is terminated too early is unproductive (and even counterproductive at times). Therefore, more systematic ways of assessing the need for therapy, establishing therapeutic goals, assessing progress and determining when to terminate are extremely important and valuable.

5.5 CONCLUDING REMARKS: A BRIEF SUMMARY OF THE MAJOR FINDINGS, CONCLUSIONS AND CENTRAL ISSUES THAT EMERGED FROM THE PRESENT STUDY

The results of the present study have confirmed the initial expectation (hypothesis) for the most part in that the originally proposed eleven factors have emerged as primary components of a structural concept of psychological well-being (i.e., the a posteriori concept that evolved is very similar to the a priori formulation). It has been demonstrated that these components are correlated with psychological well-being and are successful in significantly differentiating various levels of psychological health. A number of suggestions have been made for future research in this area throughout the thesis. There is potential applicability of the specific way of viewing and measuring psychological health that has evolved. However, the generalization and potential applicability of this concept will be a function of the results of future research.

E P I L O G U E

It is fitting to conclude this thesis by quoting Vaillant who in 1974 (p. 425) stated:

> "I am not yet prepared to claim that I know how mental health should be defined, but I believe that it exists and that it may be defined."

In 1977, he concluded (pp. 373-374):

> "Not only do I now believe that mental health is tangible, but I believe that it exists as a dimension of personality. I believe that mental health exists, much like intelligence or musical ability, as a continuum."

APPENDIX A: LETTER POSTED TO THE MENTAL HEALTH PROFESSIONALS WHO WERE REQUESTED TO GENERATE ITEMS

5 June 1983

Dear_____

I was accepted to complete a doctorate in psychology at Rhodes University in South Africa and will be leaving Israel in one month for a period of approximately two years.

As part of my doctoral research project I have been reviewing definitions of various personality predispositions of mental health.

Enclosed are eleven such definitions. I would very much appreciate it if you would create a number of questions based on each of these definitions. I am interested in receiving those questions that you might ask in an interview situation in order to ascertain, for example, the degree of the interviewee's reality testing according to the included definition of reality testing. Try to write these questions for each of the eleven definitions as if you were interviewing an average 18 to 21 year-old white English-speaking South African.

In as much as I will be leaving the country in one month, could you be so kind as to return these questions in the enclosed self-addressed envelope as soon as possible.

In the event that questions will arise related to the above, I can be reached at work (03-616224).

Your assistance at this stage of my research would greatly be appreciated. Thank you for your cooperation.

Yours sincerely

Reuven Bar-On

APPENDIX B: LIST OF INVENTORIES AND QUESTIONNAIRES USED IN ITEM GENERATION

1. Adaptability Test
2. Adjustment Questionnaire
3. Aspects of Personality
4. Association Adjustment Inventory
5. Haggerty-Olson-Wickman Behaviour Rating Schedules
6. The Berneuter Personality Inventory
7. Biographical Questionnaire
8. Bruce Test of Social Insight
9. Children's Personality Questionnaire
10. Coopersmith Self-esteem
11. Watson-Glaser Critical Thinking Appraisal
12. Depth Interview Patter
13. Downey Will-Temperament Test
14. Ethical Discrimination Test
15. Eysenck Personality Inventory
16. A Test of Family Attitudes
17. Family Relations Indicator
18. Friedlander's Life Style Questionnaire
19. Social Intelligence Test
20. Home Conditions, Personal and Family History
21. Howarth Personality Questionnaire
22. IPAT Self Analysis Form
23. Maudsley Personality Inventory
24. Mehrabian Scale
25. A Mental Hygiene Inventory
26. Minnesota Multiphasic Personality Inventory
27. The Neymann-Kohlstedt Diagnostic Test for Introversion-Extraversion
28. North Carolina Rating Scale for Fundamental Traits
29. Outline for Recreational Interview
30. Personal Data Sheet
31. Davis Personality Index and Success Guide
32. Relations Questionnaire
33. Polyfactorial Study of Personality
34. A Self-appraisal Schedule
35. The Senior South African Individual Scale as a Clinical and Diagnostic Aid
36. The S-I Inventory
37. Social Distance Scale
38. Social Intelligence Test
39. South African Personality Questionnaire
40. Strickland Internal-External Scale
41. Study of Values
42. Thurstone Temperament Schedule
43. Vineland Social Maturity Scale
44. Washburne S-A Inventory

APPENDIX C: LETTER, INSTRUCTIONS AND LIST OF ITEMS GIVEN TO PROOF-READERS

13 December 1983

Dear_____

I am a doctoral student in psychology and am presently constructing an inventory designed to study personality predispositions of mental health.

Enclosed are 210 items (i.e., short statements) related to personality factors written in simple English.

I am interested to know if you think these items are clearly stated and will be understood by the "average white English-speaking 18 to 21 year-old South African". I am interested in seeing if there are any problems with spelling (i.e., South African English spelling), syntax, grammar and local idiomatic expressions.

Please write your comments by the item in question.

Thank you very much for your help.

Reuven Bar-On

Psychology Department
tel.: 6226

1. My general approach in overcoming obstacles is step by step.

2. I can assert myself, without being too cheeky or nasty about it.

3. It's easy and natural for me to accept compliments from others.

4. I've met some people who I really respect.

5. I rarely enjoy being with others.

6. When I have to learn something new, I see it more as a hassle than as a challenge.

7. I avoid making generalizations which aren't supported by facts.

8. I'm somewhat lazy when it comes to thinking things out on my own.

9. I really think that people like parents and teachers know best what's good for you.

10. Recreation isn't an important part of my life.

11. I believe that when facing a problem, the best thing to do is to "stop and think" rather than trying the first solution that comes to mind.

12. When I differ with a person I respect, I'm able to speak up for my own viewpoint.

13. It's difficult for me to accept others the way they really are.

14. I'm seen as a person who plays a responsible role in most activities.

15. I usually try to test out my ideas to see if that's the way things really are.

16. It's easier for me to give advice to others than to rely on their advice to me.

17. I try to do the best I can in that which I enjoy doing.

18. I like entertaining and being entertained.

19. Deep down, I don't like myself that much.

20. I make a conscious effort to work for good relations with and between others.

21. I would stop and try to help a crying child find his/her parents even though it was important for me to be some place else at the same time.

22. I believe that it helps to talk about upsetting problems with others.

23. I try to avoid talking about things I know nothing about.

24. When it comes to making decisions, I prefer to rely on my own thinking rather than on advice from others.

25. If I was convinced that my approach was wrong, I would be able to change my mind in the middle of an argument.

26. Weekends aren't that enjoyable for me.

27. I try to think of as many possible ways as I can in handling situations which arise.

28. I don't tell people when they bother me.

29. I generally accept others the way they are, without trying to change them.

30. People tell me that I'm not that cooperative in my relations with others.

31. I feel helpless in dealing with serious problems.

32. I can face reality even if it hurts.

33. I believe that most people are able to leave home earlier than they do.

34. If I liked squash, I would make an attempt to observe and play with sportsmen better than I in order to improve my game.

35. I'm able to change my ideas when new experiences or evidence suggest that I'm wrong.

36. I seem to miss out on enjoying the usual opportunities for pleasure.

37. When looking at a particular situation, I usually have difficulty in spotting what is more important and what is less important.

38. I feel kind of helpless in standing up for my rights and expressing my feelings.

39. Looking at both my good points and bad points, I feel fairly good about myself.

40. I basically mistrust other people.

41. On the whole, I feel that my social relationships are rewarding for me and my friends alike.

42. I believe that I'm fairly resourceful and effective in dealing with upsetting problems.

43. When relating to others and the world around me, I feel that I have "two feet solidly on the ground".

44. I don't tend to cling to people.

45. I find it difficult to make changes in my daily routine.

46. I really don't know how to enjoy my leisure.

47. When attempting to solve a problem, I look at both the pros and cons of each possible solution and then decide on the best course of action.

48. I'm embarrassed of laughing out loud.

49. I need to be told how well I have done or am doing.

50. I would enjoy participating in a religious, sports or social group.

51. Although certain situations upset me, I generally know how to deal with them and try to relax.

52. My actions and behaviour are determined by me for the most part.

53. If I were interested in photography, I would try to learn as much as I could about it.

54. I'm able to forgive.

55. I have no sense of humour to speak of.

56. If someone would keep kicking or bumping my chair in a movie, I would courteously ask the person to stop.

57. I think that people who don't have children shouldn't pay taxes for education.

58. When asked to do work that I'm unfamiliar with, I usually give it a try and hope for the best.

59. Deep down, I feel that I have to be liked by most people most of the time.

60. I'm my own person for the most part.

61. I really believe that "man does not live by bread alone".

62. I'm satisfied with my lot.

63. I would find it difficult to defend my values and principles if my friends would strongly disagree with me.

64. I feel that one should think what he/she can do for the community more than what the community can do for him/her.

65. I think that it's a good feeling to do something nice for others from time to time.

66. It's really not that easy for me to stand on my own two feet.

67. I get a lot of enjoyment from what I do.

68. Although I may have formed a dislike for someone in the beginning, I would be able to change my feelings toward that person.

69. I'm satisfied with and enjoy my family.

70. I believe that if you've decided to do something, then "go ahead and do it".

71. If I were to discover that merchandise was faulty, I would take it back to the shop where I bought it and ask in an appropriate way that it be repaired or replaced.

72. I don't seem to make friendships that easily.

73. I can handle tension and stress without getting too nervous or falling apart.

74. I can easily pull out of daydreams and fantasies to tune into the reality of the immediate situation.

75. I would prefer others to make important decisions for me in my life.

76. I think that it's more important to learn something that's going to get you on in life even if you don't enjoy it that much, rather than something that really holds you interest but may be less beneficial for you in the long run.

77. I find it difficult to realize when I'm wrong and correct the situation.

78. I don't enjoy life.

79. It's hard for me to tell someone that I like him/her a lot.

80. I feel that people don't like me that well.

81. My relationships with others tend to be rather superficial.

82. I believe in my ability to handle most upsetting problems.

83. I tend to rely more on help from others than on myself in doing things.

84. In the last few years, I feel that I have just been passing time, stagnating.

85. It would be difficult for me to make the necessary adjustments if I were forced to leave my home.

86. I enjoy myself and feel good in many different activities like work, play, faffing around, companionship and so forth.

87. After thinking of a few possible ways of dealing with a problem, I'm the sort of person who would find it difficult to work out which of the ways was the best.

88. It's difficult to accept myself when I'm sad.

89. I tend to take difficult situations too seriously and become overwhelmed.

90. I haven't been bothered by hearing voices and strange things that other people do not hear.

91. I think that I can function better if left to do something on my own.

92. I don't approve of the way people are experimenting with sex these days.

93. I'm discouraged about life.

94. I'm able to tell my friends exactly what I think about God and religion without offending or insulting their views.

95. I feel sure of myself in most situations.

96. I'm not in favour of people in their late teens living away from home.

97. A lot of the time, I find myself doing thing I'm not interested in.

98. I believe that one's political thinking should change with the times and circumstance.

99. I have some degree of difficulty in general when it comes to making decisions.

100. If a heated discussion would arise between two of my friends, it would be hard for me to take a definite stand with the one I think is right.

101. I'm happy with my physical appearance, with the way I look.

102. When faced with serious problems, I get physically tense and fear that I'll lose control.

103. No one ever understood or will understand me.

104. It was/is difficult for me to leave home.

105. I make a conscious effort of improving myself and enriching my life.

106. My interests don't give me that much satisfaction and enjoyment.

107. I believe that there's only one correct solution to any given problem.

108. I feel comfortable with my body.

109. I dislike doing errands and helping around the house.

110. At times, I'm not absolutely sure if something has really happened or if I dreamt or thought that it has.

111. I'm more of a follower than a leader.

112. I rarely find enough outlets for my personal interests.

113. I'm unhappy.

114. I find it difficult to tell a domineering person that he/she is wrong.

115. I think that it's better to hide you fear than to show others that you're scared.

116. I don't owe anyone anything in this world.

117. I feel that I have control over what happens in my life.

118. I have had peculiar and strange experiences that can never be explained.

119. I have a strong need to be around people in order to receive emotional support.

120. I don't get that enthusiastic about my interests.

121. I enjoy my friends.

122. When presented with difficulties, I usually get too keyed up to work effectively.

123. I believe that expressing feelings is a sign of weakness.

124. If I saw an accident, I would try to take an active part in getting the situation under control and giving aid.

125. I often find myself in situations which I know will turn out badly no matter what I do.

126. I never have periods in which I feel unusually cheerful or sad without any special reason.

127. I would prefer a job in which I would be told fairly much what to do.

128. I'm interested in activities and have goals above the needs of everyday life.

129. I would be able to befriend someone from another ethnic group.

130. I don't smile that easily.

131. I believe that if at first you don't succeed, it's important to try and try again new and different approaches.

132. When I'm cross at someone, I can tell him/her about it without turning it into a vicious attack.

133. I'm able to give and receive warmth and affection.

134. I don't think that my brain is basically different from other human brains.

135. I like to plan things on my own.

136. I feel that foreigners shouldn't be trusted.

137. I can usually let myself go and enjoy myself at a lively party.

138. When thinking of possible ways of unravelling a puzzling situation, I try to let my imagination "run loose".

139. I'm not ashamed of feeling angry from time to time.

140. My close relationships with others generally don't last long.

141. Before I start an exam, I sometimes find find myself thinking that I'm going to fail.

142. If I were involved in a project with two other people, I would probably rely more on their ideas than they on mine.

143. I feel that I'm growing and moving forward as a person.

144. I'll never be convinced that my thinking about God and religion is wrong.

145. I can feel "high" without using alcohol or drugs.

146. I would not be ashamed to express my sadness to those close to me.

147. It's hard to accept the sexual feelings that I feel bubbling up within me from time to time.

148. In tight situations, I can usually come up with a suitable course of action.

149. I don't believe that my mind is controlled by someone else.

150. I seem to need others more than they need me.

151. I don't know what I'm good at.

152. I believe that men should act masculine and women should behave in a feminine way.

153. It's quite easy for me to laugh.

154. If a meal were improperly prepared or served in a cafe, I would find it difficult to ask the waiter/waitress to correct the situation.

155. I feel uncomfortable with people who look nicer, are wealthier or more educated than I.

156. I've made at least one friendship which has been close for at least two years.

157. I rarely find effective ways of dealing with the normal pressures and strains of living.

158. I try to make my life as meaningful as I can.

159. I can understand that one may have love and hate for the same person.

160. I enjoy eating.

161. When carrying out a decision, it's usually hard for me to concentrate and to focus on what I'm doing.

162. When someone steps in front of me in a queue, I can readily object without overdoing it.

163. I have the feeling that people respect me.

164. I'm unable to tell close friends intimate things about myself.

165. Before an important interview, I would feel sure of myself and decide to act naturally.

166. I have the idea that it's awful and catastrophic when things aren't the way I would like them to be.

167. I like to do things on my own, without outside help.

168. I like to have fun.

169. I like to get a general overview of the problem before trying to solve it.

170. When a salesman tries to sell me something that I really don't want, I'm able to say "no" without getting into a fight over it.

171. I can accept the fact that I'm capable of experiencing many different feelings.

172. I really don't understand people who risk their own lives to save someone else's.

173. I'm usually passive in handling stressful situations and leave the outcome to fate.

174. I don't blow things up out of proportion.

175. I believe that there's only one real way of looking at most things in life.

176. I believe that because each new situation in life is different, there's not much that can be gained from past experience.

177. My friends can tell me intimate things about themselves.

178. If I were told that I was in need of surgery, I would talk about it with someone close to me.

179. I try to see things as they really are rather than fantasizing or daydreaming about them.

180. I'm able to "lose myself" in those activities which I like doing.

181. If posted to a foreign country for a couple of years, I would probably adopt some of the customs of that country.

182. People like to be around me.

183. On moving to a new place, I would make friends readily.

184. I generally keep my personal problems and troubles to myself.

185. I feel that if somebody disagrees with me, it means that he/she doesn't like me.

186. I love my hobbies.

187. I can understand and accept the fact that someone else's thinking and beliefs are different than mine.

188. I usually don't examine the reasons for failing to solve a problem.

189. I'm able to introduce myself to strangers without any great problem.

190. I think that I'm basically a good person.

191. I normally see change as a challenge and potentially important for further personal development.

192. In order to make a situation easier for me to accept, I tend to make up explanations which aren't that factual.

193. I try to develop and expand those activities which I enjoy.

194. It's hard for me to stop what I've been doing for a long time and begin something new and different.

195. When faced with puzzling situations, I like to collect all the information about it that I can.

196. I'm unable to express my ideas to others.

197. I'm happy with the type of person I am.

198. I think what if more people could get away with crime, they would.

199. I don't make hasty conclusions without testing things out beforehand.

200. When going on a trip, I'm able to lengthen or shorten my visit to particular places according to my interest when I get there.

201. I feel that it's possible to deal effectively with most problematic situations one meets.

202. I've been told that I don't have a strong sense of responsibility.

203. I tend to neglect that which I'm interested in.

204. I like trying new and different things.

205. After attempting to deal with some difficulty in a certain way, I'm generally interested in seeing how my approach worked out.

206. It's hard for me to accept myself, the way I am.

207. If I saw an elderly person with car troubles, I would stop and try to help somehow.

208. After finding a successful solution to something, I would probably try to make use of the solution in the future.

209. I feel confident when relating with others.

210. I think that there are many people who are honest and can be trusted.

APPENDIX D: LIST OF SABOTAGE DETECTION ITEMS GIVEN TO THE PROOFREADER

1. I'm possessed by evil spirits.

2. I would have been much more successful and famous if people had not had it in for me.

3. I'm bothered by hearing very strange things.

4. At times my soul leaves my body.

5. I see strange animals and people that others do not see.

6. They write very terrible things about me in the newspapers.

7. I'm being followed everywhere I go.

8. At times I have a feeling that I must hurt either myself or someone else.

9. Someone has been trying to kill me.

10. I am convinced that there is something wrong with my mind.

11. I hear voices without knowing where they come from.

12. Someone is trying to take thoughts out of my head.

13. I feel that strangers talk about me everywhere I go.

14. Someone or something is controlling my mind.

15. I think that someone is making me do things by remote control.

16. I have said or done things that I have regretted later.

17. I have done strange things at times.

18. Sometimes I feel like swearing.

19. Sometimes I feel like smashing things.

20. I have done somethings that I have not always felt proud of.

21. Sometimes I think faster than I can speak.

22. I have some thoughts that I would rather keep to myself.

23. It annoys me when others interrupt or otherwise disturb me when I'm working on something which is very important to me.

24. I am faced with problems from time to time.

25. It does not matter to me what others think about me.

26. It's not always easy for me to make conversation when I meet new people.

27. At times I get cross at others.

28. When I'm in a group of people I sometimes have difficulty finding the right things to say.

29. I have told white lies to protect myself and others.

30. At times I have avoided someone for fear of doing or saying something that I might regret later.

APPENDIX E: BOOKLET FORM OF THE EXPERIMENTAL INVENTORY WHICH WAS PILOTED (INCLUDING COVER LETTER AND INSTRUCTIONS)

10 January 1984

AN ATTITUDINAL INVENTORY

Dear student

I was informed that you have been accepted to study at Rhodes University. Welcome to varsity!

As part of academic life, students are called upon to conduct and participate in various research projects from time to time. Enclosed is an inventory which represents part of an exciting attitudinal study currently being conducted in the Psychology Department under my direction. By responding to this inventory you well be involved in a research project right from the onset of your academic career.

The inventory is straightforward and should not take a long time to complete. Please read the instructions on the following page before you begin.

After completing the inventory, you are kindly requested to place it in the enclosed self-addressed envelope and post it no later than 1 February 1984.

Participation in this research will not affect your academic career in anyway whatsoever. Moreover, as a psychologist I am ethically and legally bound to maintain strict confidentiality.

Thank you and best wishes for an interesting year at Rhodes.

Sincerely yours

Mr. R. Bar-On

INSTRUCTIONS: This inventory consists of several different kinds of statements in the form of short sentences. It will provide you with an opportunity to describe yourself by indicating the degree to which each statement is true of the way you are, feel, think or act MOST OF THE TIME IN MOST SITUATIONS. Each sentence is followed by seven possible ranked responses:

1) ALWAYS (true of me)
2) VERY OFTEN (true of me)
3) OFTEN (true of me)
4) SOMETIMES (true of me)
5) SELDOM (true of me)
6) VERY SELDOM (true of me)
7) NEVER (true of me)

Choose the response that best describes you, and then DRAW A CIRCLE AROUND ITS CORRESPONDING NUMBER.

EXAMPLES:

THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	ALWAYS	VERY OFTEN	OFTEN	SOMETIMES	SELDOM	VERY SELDOM	NEVER
1. I like to eat different types of food.	1	2	3	4	5	6	7
2. I'm careful about keeping in good physical condition.	1	2	3	4	5	6	7
3. Driving makes me nervous.	1	2	3	4	5	6	7

Even if a statement does not apply to you, please respond in such a way that will give the best indication of how you would possibly feel, think or act. Although some of the sentences may not give you all the information you would like to receive in order to respond properly, you

are asked to give the best response you can. There are no "right" and "wrong" answers, no "good" and "bad" responses. Respond OPENLY AND HONESTLY, indicating HOW YOU ACTUALLY ARE and not how you would "like to be" or how you would "like to be seen". There is no time limit, but work quickly and make sure that you CONSIDER AND RESPOND TO EVERY STATEMENT.

- PLEASE BEGIN ON THE FOLLOWING PAGE -

THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	ALWAYS	VERY OFTEN	OFTEN	SOMETIMES	SELDOM	VERY SELDOM	NEVER
1. My general approach in overcoming obstacles is to move step by step.	1	2	3	4	5	6	7
2. I can assert myself without being too cheeky about it.	1	2	3	4	5	6	7
3. It's easy and natural for me to accept compliments.	1	2	3	4	5	6	7
4. I have met people whom I can really respect.	1	2	3	4	5	6	7
5. I think faster that I can speak.	1	2	3	4	5	6	7
6. When I have to learn something new, I see it more as a hassle than as a challenge.	1	2	3	4	5	6	7
7. I avoid making generalizations which aren't supported by facts.	1	2	3	4	5	6	7
8. I'm lazy when it comes to thinking things out on my own.	1	2	3	4	5	6	7
9. I think that people like parents and teachers know best what's good for you.	1	2	3	4	5	6	7
10. If I was convinced that my approach was wrong, I would be able to change my mind in the middle of an argument.	1	2	3	4	5	6	7
11. Recreation is an unimportant part of my life.	1	2	3	4	5	6	7
12. I believe that when facing a problem, the best thing to do is to stop and think rather than try the first solution that comes to hand.	1	2	3	4	5	6	7
13. When I disagree with a person I respect, I am able to speak up for my own viewpoint.	1	2	3	4	5	6	7
14. Deep down I dislike myself.	1	2	3	4	5	6	7
15. I don't enjoy being with others.	1	2	3	4	5	6	7

THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	ALWAYS	VERY OFTEN	OFTEN	SOMETIMES	SELDOM	VERY SELDOM	NEVER
16. It's hard for me to make conversation when I meet new people.	1	2	3	4	5	6	7
17. I believe that it helps to talk with other people about upsetting problems.	1	2	3	4	5	6	7
18. I try to test out my ideas to see if that's the way things really are.	1	2	3	4	5	6	7
19. It's easier for me to give advice to others than to accept their advice to me.	1	2	3	4	5	6	7
20. I try to do the best I can in those things I enjoy doing.	1	2	3	4	5	6	7
21. It's difficult for me to change my ideas when new experiences or fresh evidence suggest that I'm wrong.	1	2	3	4	5	6	7
22. I like entertaining and being entertained.	1	2	3	4	5	6	7
23. In handling situations which arise, I try to think of as many possible approaches as I can.	1	2	3	4	5	6	7
24. I'm unable to tell people when they bother me.	1	2	3	4	5	6	7
25. Looking at both my good points and bad points I feel good about myself.	1	2	3	4	5	6	7
26. It is difficult for me to accept others the way they really are.	1	2	3	4	5	6	7
27. When I'm in a group of people I have difficulty finding the right things to say.	1	2	3	4	5	6	7
28. I feel helpless in dealing with serious problems.	1	2	3	4	5	6	7
29. I try to avoid talking about things I know nothing about.	1	2	3	4	5	6	7

THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	ALWAYS	VERY OFTEN	OFTEN	SOMETIMES	SELDOM	VERY SELDOM	NEVER
30. When it comes to making decisions I prefer to rely on my own thinking rather than on advice from others.	1	2	3	4	5	6	7
31. If I liked squash, I would try to observe and play with sportsmen who are better than me in order to improve my game.	1	2	3	4	5	6	7
32. I find it difficult to make changes in my daily routine.	1	2	3	4	5	6	7
33. I enjoy weekends.	1	2	3	4	5	6	7
34. When looking at a particular situation, I have difficulty in seeing what is more important and what is less important.	1	2	3	4	5	6	7
35. I feel helpless when I have to stand up for my rights or express my feelings.	1	2	3	4	5	6	7
36. I need to be told how well I have done or am doing.	1	2	3	4	5	6	7
37. I accept others the way they are without trying to change them.	1	2	3	4	5	6	7
38. There are people whom I dislike.	1	2	3	4	5	6	7
39. I believe that I am resourceful and effective in dealing with upsetting problems.	1	2	3	4	5	6	7
40. I can face the unpleasant realities of life when they occur from time to time.	1	2	3	4	5	6	7
41. I believe that most people could leave home earlier than they do.	1	2	3	4	5	6	7
42. If I was interested in photography I would try to learn as much as I could about it.	1	2	3	4	5	6	7
43. I'm able to forgive.	1	2	3	4	5	6	7

THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	ALWAYS	VERY OFTEN	OFTEN	SOMETIMES	SELDOM	VERY SELDOM	NEVER
44. I seem to miss out on enjoying the usual opportunities for pleasure.	1	2	3	4	5	6	7
45. When trying to solve a problem, I look at both the pros and cons of each possible solution and then decide on the best course of action.	1	2	3	4	5	6	7
46. I'm too embarrassed to laugh out loud.	1	2	3	4	5	6	7
47. I feel that people don't like me.	1	2	3	4	5	6	7
48. Basically I mistrust other people.	1	2	3	4	5	6	7
49. I have done things that I have not felt proud of.	1	2	3	4	5	6	7
50. When certain situations upset me, I know how to deal with them and try to relax.	1	2	3	4	5	6	7
51. When relating to others and the world around me, I feel that I have both feet solidly on the ground.	1	2	3	4	5	6	7
52. I avoid clinging to others.	1	2	3	4	5	6	7
53. I believe that man does not live by bread alone.	1	2	3	4	5	6	7
54. If I formed a dislike of someone in the beginning, I am able to change my feelings toward that person later on.	1	2	3	4	5	6	7
55. I am unable to enjoy my leisure.	1	2	3	4	5	6	7
56. I believe that if you've decided to do something then you must go ahead and do it.	1	2	3	4	5	6	7
57. If someone kept kicking or bumping my chair in a movie, I would ask him or her politely to stop.	1	2	3	4	5	6	7
58. It's hard to accept myself when I'm sad.	1	2	3	4	5	6	7

THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	ALWAYS	VERY OFTEN	OFTEN	SOMETIMES	SELDOM	VERY SELDOM	NEVER
59. I feel that my social relationships are rewarding for both me and my friends alike.	1	2	3	4	5	6	7
60. There are certain thought that I would rather keep to myself.	1	2	3	4	5	6	7
61. When asked to do work that I'm unfamiliar with, I give it a try and hope for the best.	1	2	3	4	5	6	7
62. Deep down I feel that I need to be liked by most people most of the time.	1	2	3	4	5	6	7
63. On the whole my actions and behaviour are determined by me.	1	2	3	4	5	6	7
64. I feel that strangers talk about me everywhere I go.	1	2	3	4	5	6	7
65. I'm seen as a person who plays a responsible role in most activities.	1	2	3	4	5	6	7
66. I get enjoyment from what I do.	1	2	3	4	5	6	7
67. I find it difficult to see when I'm wrong and correct the situation.	1	2	3	4	5	6	7
68. I lack a sense of humour.	1	2	3	4	5	6	7
69. After thinking of a few possible ways of dealing with a problem, I'm the sort of person who finds it difficult to work out which of the ways is the best.	1	2	3	4	5	6	7
70. I would find it difficult to defend my values and principles if my friends strongly disagreed with me.	1	2	3	4	5	6	7
71. I feel sure of myself in most situations.	1	2	3	4	5	6	7
72. I fail to make friendships easily.	1	2	3	4	5	6	7
73. I have said or done things that I have regretted.	1	2	3	4	5	6	7

THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	ALWAYS	VERY OFTEN	OFTEN	SOMETIMES	SELDOM	VERY SELDOM	NEVER
74. I can handle tension and stress without getting too nervous or falling apart.	1	2	3	4	5	6	7
75. I can easily pull out of daydreams and fantasies, and tune into the reality of the immediate situation.	1	2	3	4	5	6	7
76. On the whole I am my own person.	1	2	3	4	5	6	7
77. I think that I would have been much more successful and famous if people had not had it in for me.	1	2	3	4	5	6	7
78. I make a conscious effort to work for good relations with and between others.	1	2	3	4	5	6	7
79. I think that it's more important to learn something that's going to help you get on in life even if you don't enjoy it very much, rather than something that really holds your interest but may be less beneficial for you in the long run.	1	2	3	4	5	6	7
80. I think that it would be difficult for me to make the necessary adjustments if I were forced to leave my home.	1	2	3	4	5	6	7
81. I am satisfied with my lot.	1	2	3	4	5	6	7
82. Generally I have difficulty when it comes to making decisions.	1	2	3	4	5	6	7
83. If I found that merchandise was faulty, I would take it back to the shop where I bought it and ask in an appropriate way that it be repaired or replaced.	1	2	3	4	5	6	7
84. I'm happy with my physical appearance, with the way I look.	1	2	3	4	5	6	7
85. My relationships with others tend to be superficial.	1	2	3	4	5	6	7

THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	ALWAYS	VERY OFTEN	OFTEN	SOMETIMES	SELDOM	VERY SELDOM	NEVER
86. I have done things that others might think are strange.	1	2	3	4	5	6	7
87. I believe in my ability to handle most of the upsetting problems I encounter.	1	2	3	4	5	6	7
88. I have been bothered by hearing voices and strange things that other people do not hear.	1	2	3	4	5	6	7
89. It's difficult for me to stand on my own two feet.	1	2	3	4	5	6	7
90. I am followed everywhere I go.	1	2	3	4	5	6	7
91. I would stop and try and help a crying child find his or her parents even though it was important for me to be somewhere else at the time.	1	2	3	4	5	6	7
92. I feel that in the last few years I have just been marking time, stagnating.	1	2	3	4	5	6	7
93. I disapprove of the way people are experimenting with sex these days.	1	2	3	4	5	6	7
94. I'm satisfied with and enjoy my family.	1	2	3	4	5	6	7
95. I believe that there's only one correct solution to any given problem.	1	2	3	4	5	6	7
96. It's hard for me to tell someone that I like him or her a lot.	1	2	3	4	5	6	7
97. I feel comfortable with my body.	1	2	3	4	5	6	7
98. I'm able to give and receive warmth and affection.	1	2	3	4	5	6	7
99. I have in the past told white lies to protect myself and others.	1	2	3	4	5	6	7
100. I tend to take difficult situations too seriously and become overwhelmed.	1	2	3	4	5	6	7

THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	ALWAYS	VERY OFTEN	OFTEN	SOMETIMES	SELDOM	VERY SELDOM	NEVER
101. I am convinced that no one has ever understood or will understand me.	1	2	3	4	5	6	7
102. I would prefer others to make the important decisions for me in my life.	1	2	3	4	5	6	7
103. They write terrible things about me in the newspapers.	1	2	3	4	5	6	7
104. People tell me that I tend to be uncooperative in my relations with others.	1	2	3	4	5	6	7
105. I find myself doing things that I'm not interested in.	1	2	3	4	5	6	7
106. I believe that one's political thinking should change with the times and circumstances.	1	2	3	4	5	6	7
107. It's hard for me to enjoy life.	1	2	3	4	5	6	7
108. When presented with difficulties, I get too tense to work properly.	1	2	3	4	5	6	7
109. I'm able to tell my friends exactly what I think about God and religion.	1	2	3	4	5	6	7
110. I think that it's better to hide you fear than to show others that you're scared.	1	2	3	4	5	6	7
111. My close relationships with others last for short periods of time.	1	2	3	4	5	6	7
112. I get cross with others.	1	2	3	4	5	6	7
113. When faced with serious problems I get physically tense and fear that I'll lose control.	1	2	3	4	5	6	7
114. It's hard for me to be absolutely sure whether some things have really happened or whether I have dreamt it or just thought that they have happened.	1	2	3	4	5	6	7

THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	ALWAYS	VERY OFTEN	OFTEN	SOMETIMES	SELDOM	VERY SELDOM	NEVER
115. In doing things I tend to rely more on help from others than on myself.	1	2	3	4	5	6	7
116. I am convinced that there is something wrong with my mind.	1	2	3	4	5	6	7
117. I would enjoy participating in a religious, sports or social group.	1	2	3	4	5	6	7
118. I make a conscious effort to improve myself and enrich my life.	1	2	3	4	5	6	7
119. I am able to befriend someone from another ethnic group.	1	2	3	4	5	6	7
120. I enjoy myself and feel good in activities like work, companionship, play, faffing around, and so forth.	1	2	3	4	5	6	7
121. I believe that if at first you don't succeed it's important to try and try again new and different approaches.	1	2	3	4	5	6	7
122. If a heated discussion arose between two of my friends, it would be hard for me to take a definite stand with the one I think is right.	1	2	3	4	5	6	7
123. I'm unashamed of my feelings of anger.	1	2	3	4	5	6	7
124. I've made friendships which have been close for more than two years.	1	2	3	4	5	6	7
125. It annoys me when others interrupt or otherwise disturb me when I'm working on something which is very important to me.	1	2	3	4	5	6	7
126. I believe that I have control over what happens in my life.	1	2	3	4	5	6	7
127. I have had peculiar and strange experiences that cannot be explained.	1	2	3	4	5	6	7

THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	ALWAYS	VERY OFTEN	OFTEN	SOMETIMES	SELDOM	VERY SELDOM	NEVER
128. I think that I can function better if left to do something on my own.	1	2	3	4	5	6	7
129. Someone is trying to steal my thoughts.	1	2	3	4	5	6	7
130. I think that people who don't have children shouldn't pay taxes for education.	1	2	3	4	5	6	7
131. I'm unable to find enough outlets for my personal interests.	1	2	3	4	5	6	7
132. I feel that foreigners shouldn't be trusted.	1	2	3	4	5	6	7
133. I'm discouraged about life.	1	2	3	4	5	6	7
134. When thinking of possible ways of unravelling a puzzling situation, I think that I lack imagination.	1	2	3	4	5	6	7
135. I find it difficult to tell a domineering person that he or she is wrong.	1	2	3	4	5	6	7
136. It's hard to accept the sexual feelings that surge up within me from time to time.	1	2	3	4	5	6	7
137. I'm unable to tell close friends intimate things about myself.	1	2	3	4	5	6	7
138. In the past I have avoided others for fear of doing or saying something that I might regret later.	1	2	3	4	5	6	7
139. I find myself in situations which I know will turn out badly no matter what I do.	1	2	3	4	5	6	7
140. I have had periods in which I felt, for no special reason, unusually cheerful or sad.	1	2	3	4	5	6	7
141. I disapprove of people in their late teens living away from home.	1	2	3	4	5	6	7
142. Someone or something is controlling my mind.	1	2	3	4	5	6	7

THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	ALWAYS	VERY OFTEN	OFTEN	SOMETIMES	SELDOM	VERY SELDOM	NEVER
143. I feel that you should think more about what you can do for the community that about what the community can do for you.	1	2	3	4	5	6	7
144. I lack enthusiasm for my interests.	1	2	3	4	5	6	7
145. My ideas about God and religion are unchangeable.	1	2	3	4	5	6	7
146. My interests fail to give me satisfaction and enjoyment.	1	2	3	4	5	6	7
147. When carrying out a decision and following through with a specific course of action, I find it hard to concentrate and to focus on what I'm doing.	1	2	3	4	5	6	7
148. I believe that expressing one's feelings is a sign of weakness.	1	2	3	4	5	6	7
149. I feel uncomfortable with people who look more attractive or are wealthier or more educated than I am.	1	2	3	4	5	6	7
150. My friends can tell me intimate things about themselves.	1	2	3	4	5	6	7
151. I have felt like swearing.	1	2	3	4	5	6	7
152. Before I start an exam I find myself thinking that I'm going to fail.	1	2	3	4	5	6	7
153. I think that my brain is basically like any other human brain.	1	2	3	4	5	6	7
154. It was (or is) difficult for me to leave home.	1	2	3	4	5	6	7
155. I think that someone is making me do things by remote control.	1	2	3	4	5	6	7
156. It gives me a good feeling to do something nice for others from time to time.	1	2	3	4	5	6	7

THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	ALWAYS	VERY OFTEN	OFTEN	SOMETIMES	SELDOM	VERY SELDOM	NEVER
157. I'm interested in activities and have goals beyond the needs of everyday life.	1	2	3	4	5	6	7
158. I believe that men should act masculine and that women should act in a feminine way.	1	2	3	4	5	6	7
159. I am an unhappy person.	1	2	3	4	5	6	7
160. I like to get a general overview of a problem before trying to solve it.	1	2	3	4	5	6	7
161. When I'm cross with someone I can tell him or her about it.	1	2	3	4	5	6	7
162. I have the feeling that people respect me.	1	2	3	4	5	6	7
163. On moving to a new place I make friends easily.	1	2	3	4	5	6	7
164. I have been faced with problems in the past.	1	2	3	4	5	6	7
165. In tight situations I normally come up with a suitable course of action.	1	2	3	4	5	6	7
166. I feel that I am in control of my mind.	1	2	3	4	5	6	7
167. I'm more of a follower than a leader.	1	2	3	4	5	6	7
168. Someone has been trying to kill me.	1	2	3	4	5	6	7
169. I dislike doing errands and helping around the house.	1	2	3	4	5	6	7
170. I feel that I'm growing and moving forward as a person.	1	2	3	4	5	6	7
171. I can understand that one may love and hate the same person.	1	2	3	4	5	6	7
172. I enjoy my friends.	1	2	3	4	5	6	7
173. I believe that because each new situation is different, there's not much that can be gained from past experience.	1	2	3	4	5	6	7

THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	ALWAYS	VERY OFTEN	OFTEN	SOMETIMES	SELDOM	VERY SELDOM	NEVER
174. I would be unashamed to express my sadness to those close to me.	1	2	3	4	5	6	7
175. I can accept the fact that I'm capable of experiencing many different feelings.	1	2	3	4	5	6	7
176. I think that there are many people who are honest and can be trusted.	1	2	3	4	5	6	7
177. I have felt like smashing things.	1	2	3	4	5	6	7
178. I am unable to find effective ways of dealing with the normal pressures and strains of living.	1	2	3	4	5	6	7
179. I have the idea that it's awful and catastrophic when things aren't the way I would like them to be.	1	2	3	4	5	6	7
180. I have a strong need to be with other people in order to get emotional support.	1	2	3	4	5	6	7
181. I'm bothered by hearing very strange things.	1	2	3	4	5	6	7
182. I have the feeling that I don't owe anyone anything in this world.	1	2	3	4	5	6	7
183. It's hard to know what I'm good at.	1	2	3	4	5	6	7
184. I think that there's only one real way of looking at most things in life.	1	2	3	4	5	6	7
185. It's hard for me to smile.	1	2	3	4	5	6	7
186. Normally I avoid examining the reasons for failing to solve a problem.	1	2	3	4	5	6	7
187. If a meal were improperly prepared or served at a cafe, I would find it difficult to ask the waiter or waitress to correct the situation.	1	2	3	4	5	6	7

	THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	ALWAYS	VERY OFTEN	OFTEN	SOMETIMES	SELDOM	VERY SELDOM	NEVER
188.	People like to be with me.	1	2	3	4	5	6	7
189.	If I were to have an important interview, I would feel sure of myself and act naturally.	1	2	3	4	5	6	7
190.	I avoid blowing things up out of proportion.	1	2	3	4	5	6	7
191.	I prefer a job in which I am told pretty much what to do.	1	2	3	4	5	6	7
192.	I hear voices without knowing where they come from.	1	2	3	4	5	6	7
193.	If I saw an accident I would try to take an active part in getting the situation under control and giving aid.	1	2	3	4	5	6	7
194.	I try to make my life as meaningful as I can.	1	2	3	4	5	6	7
195.	If posted to a foreign country for a couple of years, I would adopt the customs of that country.	1	2	3	4	5	6	7
196.	I can let myself go and enjoy myself as a lively party.	1	2	3	4	5	6	7
197.	When faced with a puzzling situation, I like to collect all the information about it that I can.	1	2	3	4	5	6	7
198.	When someone steps in front of me in a queue I am able to voice my objection.	1	2	3	4	5	6	7
199.	I think that I'm basically a good person.	1	2	3	4	5	6	7
200.	I'm passive in handling stressful situations and leave the outcome to fate.	1	2	3	4	5	6	7
201.	I try to see things as they really are, without fantasizing or daydreaming about them.	1	2	3	4	5	6	7
202.	I like to plan things on my own.	1	2	3	4	5	6	7

THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	ALWAYS	VERY OFTEN	OFTEN	SOMETIMES	SELDOM	VERY SELDOM	NEVER
203. I see strange animals and people that others do not see.	1	2	3	4	5	6	7
204. It's hard for me to identify with people who risk their own lives to save someone else's.	1	2	3	4	5	6	7
205. I'm able to lose myself in those activities which I enjoy doing.	1	2	3	4	5	6	7
206. I can understand and accept the fact that someone else's thinking and beliefs are different from mine.	1	2	3	4	5	6	7
207. I can feel high without using alcohol or drugs.	1	2	3	4	5	6	7
208. I feel that it's possible to deal effectively with most problematic situations one meets.	1	2	3	4	5	6	7
209. When a salesman tries to sell me something that I really don't want, I'm able to say "no".	1	2	3	4	5	6	7
210. I'm happy with the type of person I am.	1	2	3	4	5	6	7
211. If I were told that I was in need of surgery I would talk about it with someone close to me.	1	2	3	4	5	6	7
212. I feel that if somebody disagrees with me it means that he or she doesn't like me.	1	2	3	4	5	6	7
213. If I were involved in a project with two other people, I would rely more on their ideas than they on mine.	1	2	3	4	5	6	7
214. I'm possessed by evil spirits.	1	2	3	4	5	6	7
215. If I could get away with breaking or bending the law in certain situations I would.	1	2	3	4	5	6	7
216. I love my hobbies.	1	2	3	4	5	6	7
217. It's hard for me to stop what I've been doing for a long time and begin something new and different.	1	2	3	4	5	6	7

THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	ALWAYS	VERY OFTEN	OFTEN	SOMETIMES	SELDOM	VERY SELDOM	NEVER
218. It's easy for me to laugh.	1	2	3	4	5	6	7
219. After attempting to deal with some difficulty in a particular way, I'm interested in seeing how my approach worked out.	1	2	3	4	5	6	7
220. I'm able to introduce myself to strangers without great difficulty.	1	2	3	4	5	6	7
221. It's hard for me to accept myself just the way I am.	1	2	3	4	5	6	7
222. I keep my personal problems and troubles to myself.	1	2	3	4	5	6	7
223. In order to make a situation easier for me to accept, I tend to make up explanations which aren't true.	1	2	3	4	5	6	7
224. I seem to need others more than they need me.	1	2	3	4	5	6	7
225. I have a feeling that I must injure either myself or someone else.	1	2	3	4	5	6	7
226. I've been told that I don't have a strong sense of responsibility.	1	2	3	4	5	6	7
227. I try to develop and expand those activities which I enjoy.	1	2	3	4	5	6	7
228. When going on a trip I'm able to lengthen or shorten my visit to particular places according to my interest when I get there.	1	2	3	4	5	6	7
229. I enjoy eating.	1	2	3	4	5	6	7
230. After finding a successful solution to something I would try to make use of the solution in the future.	1	2	3	4	5	6	7
231. I'm unable to express my ideas to others.	1	2	3	4	5	6	7

THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	ALWAYS	VERY OFTEN	OFTEN	SOMETIMES	SELDOM	VERY SELDOM	NEVER
232. I feel confident when relating to others.	1	2	3	4	5	6	7
233. Normally I see change as a challenge and potentially important for further personal development.	1	2	3	4	5	6	7
234. I test things out before coming to conclusions.	1	2	3	4	5	6	7
235. I like to do things on my own, without outside help.	1	2	3	4	5	6	7
236. I feel cut off from my body.	1	2	3	4	5	6	7
237. If I saw an elderly person with car troubles I would stop and try to help.	1	2	3	4	5	6	7
238. I tend to neglect that which I'm interested in.	1	2	3	4	5	6	7
239. I like trying new and different things.	1	2	3	4	5	6	7
240. I like to have fun.	1	2	3	4	5	6	7

- THANK YOU VERY MUCH FOR YOUR COOPERATION -

APPENDIX F: STATISTICAL PROPERTIES OF THE 240 ITEMS WHICH WERE PILOTED

Item	Mean	S.D.	Mode	Med.	Skew	Kurtosis	No. & Mean Last Higher on i.a. of coeff.	other scale
1.	4.9	1.2	5.0	5.0	-.628	.782	10 (.38)	.54
2.	5.3	1.1	5.0	5.3	-.345	-.006	2 (.25)	REJECTED BEFORE
3.	4.3	1.3	4.0	4.3	.297	-.323	8 (.36)	.35 IPR
4.	4.8	1.3	5.0	4.9	-.458	-.207		.17 H
5.	3.1	1.3	4.0	3.2	.133	-.309	4 (.27)	.30
6.	5.0	1.1	6.0	5.1	-.468	-.386	6 (.27)	.04 S-A
7.	4.9	1.2	4.0	4.9	-.125	-.595	4 (.29)	REJECTED BEFORE
8.	5.0	1.3	6.0	5.2	-.651	-.156	4 (.34)	REJECTED BEFORE
9.	4.0	1.4	4.0	3.9	.219	-.677	0 (.00)	REJECTED BEFORE
10.	4.8	1.4	6.0	4.8	-.423	-.346	4 (.27)	.12
11.	5.6	1.9	7.0	6.6	-1.227	.281	4 (.23)	REJECTED BEFORE
12.	5.5	1.4	6.0	5.8	-.786	-.137	10 (.40)	.58
13.	6.0	1.0	6.0	6.2	-1.040	.856	10 (.31)	.42
14.	5.1	1.6	6.0	5.6	-.557	-.770	11 (.39)	.63
15.	5.4	1.4	6.0	5.9	-.684	-.786		.54 H
16.	4.8	1.6	6.0	5.1	-.513	-.718	2 (.50)	.03
17.	5.0	1.6	6.0	5.3	-.620	-.403	7 (.33)	.09 IPR
18.	4.6	1.1	4.0	4.4	.014	.636	6 (.30)	.41 ST
19.	4.4	1.0	4.0	4.4	-.224	-.419	1 (.22)	REJECTED BEFORE
20.	6.1	1.1	7.0	6.5	-.884	-.508	14 (.37)	.50 P-S
21.	4.7	1.3	5.0	4.8	-.150	-.677	8 (.30)	.43
22.	5.4	1.4	6.0	5.7	-.813	.353	14 (.40)	.62 IPR
23.	5.1	1.1	5.0	5.1	.096	-.630	11 (.40)	.60
24.	4.0	1.6	4.0	4.1	-.305	-.829	7 (.41)	.61
25.	4.8	1.2	6.0	4.9	-.320	-.509	15 (.40)	.69
26.	5.1	1.5	6.0	5.6	-.667	-.590		.34 R
27.	4.7	1.4	6.0	4.9	-.609	-.358	2 (.50)	.02
28.	5.1	1.2	6.0	5.3	-.764	.853	11 (.33)	.44 A
29.	4.8	1.4	5.0	4.9	-.472	.088	0 (.00)	REJECTED BEFORE
30.	5.2	1.2	6.0	5.3	-.549	.014	6 (.33)	.38
31.	5.5	1.3	6.0	5.7	-.700	.026	8 (.28)	.23 I
32.	5.0	1.2	5.0	4.9	.097	-.687	3 (.32)	.27
33.	6.2	1.0	7.0	6.5	-1.313	.969	14 (.39)	.52
34.	4.9	1.2	6.0	5.0	-.574	.111	7 (.34)	.39 RT
35.	5.4	1.5	6.0	5.8	-.908	.298	12 (.41)	.72
36.	3.7	1.5	3.0	3.4	.393	-.237	4 (.27)	.13 ST
37.	5.2	1.2	6.0	5.3	-.499	-.003		.05
38.	3.3	1.3	3.0	3.2	.305	-.106	3 (.35)	.34
39.	4.8	0.9	4.0	4.7	-.053	-.910	12 (.33)	.52
40.	5.2	1.3	6.0	5.4	-.994	1.213	5 (.30)	.48 ST
41.	4.2	1.5	4.0	4.2	-.184	-.188	8 (.28)	.33 F
42.	5.9	1.0	6.0	6.0	-.482	-.751	17 (.39)	.61
43.	5.2	1.4	5.0	5.3	-.855	.868	1 (.55)	REJECTED BEFORE
44.	4.7	1.4	4.0	4.5	-.113	-1.009	14 (.38)	.55
45.	5.0	1.3	6.0	5.1	-.365	-.488	12 (.47)	.73
46.	5.7	1.2	6.0	6.0	-.780	-.230	4 (.31)	.30 S-A
47.	4.9	1.2	4.0	4.8	-.140	-.397	15 (.38)	.51 R
48.	4.9	1.4	6.0	5.1	-.608	-.406		.35 H

Item	Mean	S.D.	Mode	Med.	Skew	Kurtosis	No. & mean of coeff.	Last Higher on i.a.	other scale
49.	3.8	1.2	4.0	3.7	.389	-.492	6 (.29)	.41	
50.	4.4	1.4	4.0	4.4	-.232	-.392	9 (.44)	.81	
51.	5.3	1.1	5.0	5.3	-.358	-.028	12 (.38)	.49	R
52.	5.6	1.1	6.0	5.7	-.465	-.375	10 (.34)	.51	
53.	5.9	1.2	6.0	6.1	-1.755	4.342	12 (.33)	.44	P-S
54.	5.2	1.3	6.0	5.4	-1.299	2.199	4 (.39)	.01	H
55.	5.4	1.8	6.0	6.0	-1.414	.956	6 (.28)	REJECTED BEFORE	
56.	5.9	1.0	7.0	6.1	-.466	-.942	4 (.25)	.29	
57.	5.6	1.6	7.0	6.0	-.905	-.219	4 (.36)	.56	SR
58.	4.1	1.5	4.0	4.1	.016	-.634	2 (.29)	REJECTED BEFORE	
59.	5.4	1.2	6.0	5.6	-.940	.939		.68	
60.	2.5	1.3	2.0	2.3	.793	.325	1 (.34)	.17	
61.	5.3	1.2	5.0	5.3	-.285	-.146	4 (.29)	REJECTED BEFORE	
62.	3.2	1.4	3.0	3.0	.671	.281	1 (.25)	REJECTED BEFORE	
63.	5.6	0.7	6.3	5.7	-.277	-.054	8 (.33)	.32	
64.	5.2	1.3	6.0	5.6	-.725	-.220	5 (.37)	.39	
65.	4.7	1.2	5.0	4.8	-.510	-.031		.39	
66.	5.6	1.0	6.0	5.8	-.686	.048	15 (.40)	.64	
67.	4.3	1.1	4.0	4.1	.482	.172	3 (.26)	.13	
68.	5.7	1.2	6.0	5.8	-.603	-.455	14 (.34)	.45	
69.	4.7	1.3	6.0	4.8	-.314	-.734	11 (.36)	.51	RT
70.	5.5	1.3	6.0	5.8	-1.169	1.958	7 (.31)	.37	I
71.	5.1	1.1	6.0	5.2	-.385	-.850	11 (.40)	.57	A
72.	4.9	1.5	6.0	5.0	-.400	-.662		.64	
73.	3.8	1.0	4.0	3.8	.025	.270	5 (.29)	.19	FB
74.	4.7	1.4	6.0	4.9	-.504	-.765	7 (.46)	.59	
75.	5.0	1.1	5.0	5.1	-.558	.034	10 (.37)	.62	
76.	5.8	1.0	6.0	6.0	-1.098	1.766	6 (.43)	.32	S-A
77.	6.2	1.1	7.0	6.5	-1.870	3.744	0 (.00)	.04	
78.	5.2	1.2	5.0	5.2	-.240	-.441		.58	IPR
79.	4.2	1.7	4.0	4.2	-.198	-.647	0 (.00)	REJECTED BEFORE	
80.	5.7	1.3	6.0	5.9	-1.535	2.483	2 (.27)	.36	
81.	5.0	1.3	6.0	5.3	-1.037	.845	13 (.37)	.53	
82.	4.7	1.4	6.0	4.9	-.531	-.378	8 (.29)	.27	I
83.	5.7	1.4	7.0	6.0	-.985	.367	4 (.33)	.18	I
84.	4.5	1.3	5.0	4.7	-.565	.026	13 (.66)	.66	
85.	5.2	1.3	6.0	5.3	-.240	-.916		.52	S-A
86.	3.5	1.3	4.0	3.4	.270	.167	7 (.32)	.45	
87.	5.3	0.9	5.0	5.3	-.543	.371	14 (.39)	.64	
88.	6.5	0.9	7.0	6.8	-2.071	4.360	5 (.30)	.28	
89.	5.9	1.0	6.0	6.1	-1.130	1.325	13 (.42)	.60	S-A
90.	5.9	1.4	7.0	6.5	-1.187	.754	6 (.33)	.28	
91.	5.1	1.4	5.0	5.1	-.443	.254		.29	
92.	5.0	2.0	7.0	5.6	-.576	-.921	14 (.32)	.45	
93.	4.5	1.8	6.0	4.4	-.327	-1.049	2 (.26)	.28	
94.	5.2	1.5	6.0	5.5	-.696	-.107	14 (.41)	.55	R
95.	4.6	1.4	6.0	4.6	-.330	-.621	0 (.00)	REJECTED BEFORE	
96.	3.9	1.8	2.0	3.8	.197	-.923	7 (.33)	.47	IPR
97.	4.6	1.4	5.0	4.7	-.456	-.231	15 (.41)	.62	
98.	5.3	1.3	6.0	5.7	-.937	.372		.63	
99.	3.5	1.1	3.0	3.4	.574	.346	2 (.30)	.14	FB
100.	4.3	1.3	5.0	4.4	-.393	-.235	8 (.37)	.47	

Item	Mean	S.D.	Mode	Med.	Skew	Kurtosis	No. & mean of coeff.	Last i.a.	Higher on other scale
101.	4.9	1.5	4.0	5.0	-.197	-.972	7 (.29)	.47	R
102.	6.1	1.3	7.0	6.5	-1.618	3.136	10 (.34)	.46	
103.	6.9	0.5	7.0	7.0	-5.065	-29.338	1 (.32)	.04	
104.	5.4	1.5	6.0	5.8	-.707	-.215		.29	H
105.	4.9	1.1	6.0	5.0	-.201	-.932	14 (.35)	.49	
106.	4.7	1.6	5.0	5.0	-.740	-.083	3 (.29)	.31	
107.	5.7	1.3	6.0	5.9	-1.085	.908	17 (.50)	.80	
108.	5.0	1.1	6.0	5.1	-.564	-.281	8 (.30)	.56	ST
109.	5.1	1.7	7.0	5.3	-.470	-.949	8 (.34)	.39	S-A
110.	3.8	1.4	4.0	3.9	-.063	-.434	6 (.27)	.25	
111.	5.3	1.2	6.0	5.7	-.720	-.334		.16	I
112.	3.9	1.2	4.0	3.9	.430	.020	3 (.29)	.20	FB
113.	5.2	1.2	6.0	5.4	-.673	-.125	13 (.36)	.56	
114.	5.7	1.3	6.0	6.0	-.857	-.177	12 (.32)	.58	
115.	5.4	1.1	6.0	5.6	-.756	-.013	10 (.42)	.46	S-A
116.	6.0	1.4	7.0	6.6	-1.154	.234	8 (.36)	.55	
117.	5.0	1.5	6.0	5.3	-.671	-.181		.29	H
118.	5.5	1.1	6.0	5.6	-.185	-1.025	15 (.40)	.61	
119.	5.2	1.4	6.0	5.4	-.697	.418	4 (.30)	.11	S-A
120.	5.6	1.0	6.0	5.6	-.951	1.989	19 (.44)	.63	
121.	5.7	1.1	6.0	5.8	-.528	-.376	11 (.39)	.64	
122.	5.1	1.4	6.0	5.2	-.258	-.946	9 (.29)	.46	
123.	4.3	1.7	4.0	4.4	-.103	-.842	0 (.00)	REJECTED BEFORE	
124.	5.5	1.2	6.0	5.7	-1.218	1.719		.37	A
125.	3.0	1.3	2.0	2.9	.293	-.371	1 (.22)	.23	
126.	5.2	1.2	5.0	5.3	-1.105	1.857	5 (.34)	.41	SR
127.	5.4	1.6	7.0	5.8	-.855	-.096	6 (.28)	.38	
128.	5.2	1.2	5.0	5.1	-.168	.052	5 (.32)	REJECTED BEFORE	
129.	6.1	1.1	7.0	6.6	-.885	-.651	6 (.31)	.54	
130.	5.0	1.9	7.0	5.3	-.624	-.662		.36	
131.	4.7	1.5	6.0	4.9	-.478	-.404	7 (.28)	REJECTED BEFORE	
132.	5.8	1.5	7.0	6.2	-1.566	2.155	4 (.29)	.13	
133.	5.3	1.4	6.0	5.7	-.823	.271	14 (.39)	.55	
134.	4.9	1.3	4.0	4.8	-.092	-.609	1 (.28)	REJECTED BEFORE	
135.	4.7	1.5	4.0	4.8	-.348	-.318	12 (.38)	.73	
136.	5.3	1.4	6.0	5.7	-.950	.536	7 (.38)	.49	A
137.	4.2	1.6	4.0	4.3	-.306	-.616		.56	ST
138.	5.4	1.3	6.0	5.6	-.923	1.019	5 (.27)	.13	FB
139.	4.8	1.4	6.0	4.8	-.407	-.254	10 (.32)	.40	RT
140.	3.2	1.2	2.0	3.1	.474	-.092	6 (.32)	.37	
141.	5.3	1.5	6.0	5.7	-.680	-.544	7 (.29)	.37	S-A
142.	6.0	1.3	7.0	6.6	-1.405	1.208	5 (.34)	.50	
143.	4.4	1.5	4.0	4.2	.016	.033		.25	P-S
144.	5.4	1.2	6.0	5.6	-.534	-.148	17 (.41)	.65	
145.	3.9	1.9	5.0	4.0	-.010	-1.249	2 (.34)	.30	
146.	5.8	1.0	6.0	5.9	-.547	.015	15 (.34)	.43	S-A
147.	5.1	1.2	6.0	5.3	-1.051	1.786	4 (.27)	.41	RT
148.	6.0	1.1	7.0	6.3	-.998	.088	9 (.31)	.54	IPR
149.	5.0	1.4	6.0	5.2	-.352	-.616	11 (.34)	.34	A
150.	5.5	1.4	7.0	5.7	-.638	-.458		.51	
151.	2.9	1.1	2.0	2.8	.498	.284	6 (.34)	.55	
152.	5.1	1.2	6.0	5.1	-.220	-.508	10 (.31)	.45	SR

Item	Mean	S.D.	Mode	Med.	Skew	Kurtosis	No. & mean of coeff.	Last i.a.	Higher on other scale
153.	5.2	1.6	6.0	5.5	-.835	.202	6 (.29)	.23	H
154.	5.1	1.7	7.0	5.4	-.714	-.379	5 (.33)	.38	F
155.	6.7	0.8	7.0	6.9	-2.482	5.621	7 (.32)	.56	
156.	6.2	1.0	7.0	6.4	-.906	-.193		.34	S-A
157.	6.0	1.0	6.0	6.1	-.805	.343	13 (.30)	.42	I
158.	3.2	1.7	2.0	3.0	.593	-.305	4 (.30)	.47	
159.	5.1	1.3	6.0	5.5	-.787	.332	17 (.52)	.81	
160.	5.5	1.1	6.0	5.7	-1.197	2.068	7 (.28)	.37	
161.	4.7	1.2	5.0	4.7	-.105	-.273	13 (.32)	.53	
162.	4.6	0.9	4.0	4.6	.023	.295	11 (.29)	.25	A
163.	4.6	1.5	6.0	4.7	-.366	-.509		.63	H
164.	2.8	1.1	3.0	2.8	.040	-.677	3 (.25)	.32	
165.	5.1	0.8	5.0	5.1	.223	.322	14 (.32)	.49	
166.	6.0	1.0	7.0	6.2	-.662	-.721	10 (.33)	.34	S-A
167.	5.1	1.2	6.0	5.2	-.558	.145	12 (.32)	.45	
168.	6.9	0.6	7.0	7.0	-4.454	20.184	4 (.37)	.35	
169.	4.2	1.6	5.0	4.4	-.376	-.501		.44	
170.	5.7	1.0	6.0	5.9	-.844	.821	13 (.35)	.52	
171.	4.7	1.6	6.0	4.8	-.687	-.151	2 (.29)	.16	
172.	6.0	0.9	6.0	6.1	-.815	.849	17 (.38)	.53	S-A
173.	5.8	1.1	6.0	5.9	-.667	-.154	4 (.25)	REJECTED BEFORE	
174.	4.3	2.0	5.0	4.6	-.184	-1.235	0 (.00)	REJECTED BEFORE	
175.	6.2	0.8	6.0	6.2	-.503	-.617	3 (.28)	REJECTED BEFORE	
176.	5.4	1.4	6.0	5.7	-1.221	1.564		.23	H
177.	4.1	1.6	4.0	4.0	.079	-.937	4 (.35)	.48	
178.	5.3	1.2	6.0	5.5	-1.058	1.773	12 (.28)	.30	S-A
179.	4.6	1.3	4.0	4.6	-.198	.138	5 (.32)	.25	ST
180.	4.2	1.3	5.0	4.4	-.503	-.119	9 (.33)	.38	
181.	5.9	1.3	7.0	6.3	-1.077	.208	5 (.33)	.29	
182.	5.2	1.6	7.0	5.3	-.747	.196		.39	
183.	4.6	1.5	5.0	4.8	-.480	.090	13 (.35)	.49	
184.	4.8	1.6	5.0	4.9	-.371	-.698	4 (.31)	.44	
185.	5.6	1.3	6.0	5.9	-.955	.417	17 (.46)	.71	
186.	5.0	1.3	5.0	5.0	-.547	.488	13 (.35)	.60	RT
187.	4.5	1.7	5.0	4.8	-.518	-.314	8 (.37)	.37	SR
188.	4.7	0.9	5.0	4.7	-.219	.499	8 (.27)	.32	H
189.	5.0	1.1	5.0	5.0	-.064	-.618	6 (.28)	.11	A
190.	4.6	1.2	5.0	4.6	-.641	.596	10 (.32)	.54	
191.	5.1	1.3	5.0	5.0	.008	-.919	12 (.32)	.44	
192.	6.6	0.8	7.0	6.8	-2.241	4.636	8 (.34)	.57	
193.	4.9	1.6	6.0	5.2	-.458	-.725		.34	H
194.	5.8	1.1	6.0	6.0	-1.031	.839	14 (.45)	.70	
195.	5.0	1.6	5.0	5.1	-.714	.200	1 (.43)	REJECTED BEFORE	
196.	5.2	1.4	6.0	5.6	-.584	-.125	15 (.47)	.62	
197.	5.3	1.0	5.0	5.3	-.163	-.116	11 (.34)	.51	
198.	4.9	1.4	5.0	5.0	-.757	.965	3 (.34)	REJECTED BEFORE	
199.	5.3	1.1	5.0	5.2	-.321	.745	11 (.33)	.45	
200.	4.4	1.4	4.0	4.4	-.224	-.532	5 (.30)	REJECTED BEFORE	
201.	5.0	1.3	5.0	5.1	-.691	.534	14 (.37)	.62	
202.	5.2	1.2	6.0	5.3	-.881	1.435	9 (.33)	.43	
203.	6.7	0.7	7.0	6.9	-3.154	9.815	7 (.31)	.32	
204.	5.0	1.4	5.0	5.1	-.403	-.401		.34	IPR

Item	Mean	S.D.	Mode	Med.	Skew	Kurtosis	No. & mean of coeff.	Last i.a.	Higher on other scale
205.	5.4	1.3	6.0	5.7	-.767	.237	9 (.30)	.32	
206.	6.1	0.9	7.0	6.3	-1.018	.920	5 (.30)	.27	I
207.	5.3	1.3	5.0	5.4	-.685	.614	11 (.29)	REJECTED BEFORE	
208.	5.5	1.0	5.0	5.5	-.552	1.097	11 (.36)	.51	
209.	5.8	1.2	7.0	6.0	-1.215	2.318	5 (.27)	.14	H
210.	5.1	1.0	5.0	5.2	-.359	-.291	13 (.44)	.63	
211.	5.7	1.4	7.0	6.1	-1.395	1.872	4 (.29)	REJECTED BEFORE	
212.	5.7	1.0	6.0	5.8	-.510	-.404	8 (.28)	.25	P-S
213.	5.3	1.1	5.0	5.3	-.460	.271	11 (.39)	.46	
214.	6.7	0.8	7.0	6.9	-3.028	9.764	2 (.38)	.29	
215.	4.8	1.7	6.0	4.9	-.420	-.765		.46	
216.	5.6	1.3	6.0	5.8	-.726	-.202	15 (.33)	.50	
217.	4.3	1.5	4.0	4.2	.003	-.450	2 (.34)	.13	S-A
218.	5.8	1.2	6.0	6.0	-1.452	3.169	17 (.47)	.74	
219.	5.8	1.0	6.0	5.9	-.296	-1.025	9 (.34)	.47	
220.	4.6	1.6	4.0	4.6	-.291	-.724	8 (.28)	.53	IPR
221.	4.7	1.4	5.0	4.9	-.503	-.516	13 (.41)	.58	
222.	3.7	1.5	4.0	3.8	-.015	-.460	7 (.27)	.48	IPR
223.	5.3	1.3	6.0	5.5	-.650	-.138	8 (.31)	.31	I
224.	4.6	1.3	4.0	4.5	-.466	.390	10 (.34)	.34	
225.	6.0	1.3	7.0	6.4	-1.261	.808	8 (.35)	.47	
226.	5.2	1.5	6.0	5.7	-.763	-.153		.30	
227.	5.6	1.0	6.0	5.7	-.381	-.489	16 (.46)	.76	
228.	5.5	1.2	6.0	5.7	-.717	.218	1 (.25)	REJECTED BEFORE	
229.	5.7	1.1	7.0	5.7	-.416	-.684	13 (.37)	.47	
230.	5.5	1.0	6.0	5.6	-.226	-.727	4 (.31)	.35	
231.	5.2	1.3	6.0	5.3	-.767	.591	10 (.32)	.50	
232.	5.2	1.1	6.0	5.5	-.705	-.140	13 (.39)	.65	A
233.	5.7	1.0	6.0	5.8	-.412	-.465	6 (.30)	.47	P-S
234.	4.7	1.0	4.0	4.5	.277	.067	11 (.33)	.39	P-S
235.	5.1	1.1	5.0	5.1	-.829	1.966	8 (.35)	.44	
236.	5.9	1.5	7.0	6.5	-1.594	2.140	6 (.34)	.48	
237.	5.1	1.5	5.0	5.2	-.599	-.041		.08	P-S
238.	5.1	1.2	4.0	5.0	-.028	-.701	16 (.34)	.53	
239.	5.7	1.0	6.0	5.8	-.300	-.827	5 (.28)	.28	
240.	6.2	1.0	7.0	6.4	-1.198	1.235	17 (.48)	.72	

APPENDIX G: THE 130-ITEM INVENTORY AFTER PILOTING (INCLUDING COVER LETTER, PERSONAL INFORMATION FORM AND INSTRUCTIONS)

10 April 1984

AN ATTITUDINAL STUDY

Dear Student

As part of academic life, students are called upon to conduct and participate in various research projects from time to time. This booklet contains two inventories which represent part of an attitudinal study currently being conducted in the Psychology Department under my direction. By responding to the items you will be involved in a research project right from the onset of your academic career at Rhodes University.

Both inventories are straightforward and should not take a long time to complete. Read the instructions carefully before beginning each section. The instructions for the first part are on page iii; after completing this section, proceed to the second set of instructions before continuing with the second and last part.

You will be able to fill in the booklet in you free time and return it to your tutor at the next tutorial, or see to it that it gets to me in the Psychology Department as soon as possible. Remember that the way in which you respond to the booklet represents you and should not be based on help from others.

If you completed a similar type of inventory in January, please respond to the current inventories as well.

Participation in this research will not affect your academic career in anyway whatsoever. Moreover, as a psychologist I am ethically and legally bound to maintain strict confidentiality.

Thank you and best wishes for a good year at Rhodes.

Sincerely yours

Mr. R. Bar-On

PLEASE FILL IN THE FOLLOWING INFORMATION ABOUT YOURSELF

1. Age:_____years and_____months.

2. Sex: male/female.

3. Ethnic group: African/European/Asian/Coloured/other (specify:)

4. Citizenship:

5. Language spoken at home:

6. Faculty:_____and Department:

7. Were you asked to participate in an attitudinal study conducted in the Psychology Department in January 1984? Yes/No.

   If yes, please give your full name:_____.

8. Would you be willing to be interviewed (approximately 20 minutes) and asked a few questions related to the present study? Yes/No

   If yes, please give the following particulars and indicate below all the possible times that are available to you for the interview.

   Name:

   Address and telephone number:

.	Mon	Tue	Wed	Thurs	Fri	Sat	Sun .
. 8h00							.
. 8h30							.
. 9h00							.
. 9h30							.
.10h00							.
.10h30							.
.11h00							.
.11h30							.
.12h00							.
.12h30							.
.13h00							.
.13h30							.
.14h00							.
.14h30							.
.15h00							.
.15h30							.
.16h00							.

* READ THE INSTRUCTIONS FOR THE FIRST INVENTORY ON THE FOLLOWING PAGE *

INSTRUCTIONS: This inventory consists of several different kinds of statements in the form of short sentences. It will provide you with an opportunity to describe yourself by indicating the degree to which each statement is true of the way you are, feel, think or act MOST OF THE TIME IN MOST SITUATIONS. Each sentence is followed by seven possible ranked responses:

1) NEVER (true of me)

2) VERY SELDOM (true of me)

3) SELDOM (true of me)

4) SOMETIMES (true of me)

5) OFTEN (true of me)

6) VERY OFTEN (true of me)

7) ALWAYS (true of me)

Choose the response that best describes you, and then DRAW A CIRCLE AROUND ITS CORRESPONDING NUMBER TO THE RIGHT OF THE SENTENCE.

EXAMPLES:

THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	NEVER	VERY SELDOM	SELDOM	SOMETIMES	OFTEN	VERY OFTEN	ALWAYS
1. I like to eat different types of food.....	1	2	3	4	5	6	7
2. I'm careful about keeping in good physical condition.....	1	2	3	4	5	6	7
3. Driving makes me nervous.....	1	2	3	4	5	6	7

Now try the following sample statement.

SAMPLE:

4. I will respond to the following items according to the above-mentioned instructions.....	1	2	3	4	5	6	7

Even if a statement does not apply to you, please respond in such a way that will give the best indication of how you would possibly feel, think

or act. Although some of the sentences may not give you all the information you would like to receive in order to respond properly, you are asked to give the best response you can. There are no "right" and "wrong" answers, no "good" and "bad" responses. Respond OPENLY AND HONESTLY, indicating HOW YOU ACTUALLY ARE and not how you would "like to be" or how you would "like to be seen". There is no time limit, but work quickly and make sure that you CONSIDER AND RESPOND TO EVERY STATEMENT.

* PLEASE BEGIN ON THE FOLLOWING PAGE *

THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	NEVER	VERY SELDOM	SELDOM	SOMETIMES	OFTEN	VERY OFTEN	ALWAYS
1. My general approach in overcoming obstacles is to move step by step	1	2	3	4	5	6	7
2. I get enjoyment from what I do	1	2	3	4	5	6	7
3. I like entertaining and being entertained	1	2	3	4	5	6	7
4. I can easily pull out of daydreams and fantasies, and tune into the reality of the immediate situation	1	2	3	4	5	6	7
5. When I disagree with a person I respect, I am able to speak up for my own viewpoint	1	2	3	4	5	6	7
6. It is difficult for me to accept others the way they really are	1	2	3	4	5	6	7
7. I believe that I am resourceful and effective in dealing with upsetting problems	1	2	3	4	5	6	7
8. I think faster than I can speak	1	2	3	4	5	6	7
9. Looking at both my good points and bad points, I feel good about myself	1	2	3	4	5	6	7
10. It's difficult for me to change my ideas when new experiences or fresh evidence suggest that I'm wrong	1	2	3	4	5	6	7
11. On the whole my actions and behaviour are determined by me	1	2	3	4	5	6	7
12. I am followed everywhere I go	1	2	3	4	5	6	7
13. I enjoy weekends	1	2	3	4	5	6	7
14. I believe that when facing a problem, the best thing to do is to stop and think rather than try the first solution that comes to hand	1	2	3	4	5	6	7
15. I feel that in the last few years I have just been marking time, stagnating	1	2	3	4	5	6	7

THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	NEVER	VERY SELDOM	SELDOM	SOMETIMES	OFTEN	VERY OFTEN	ALWAYS
16. I fail to make friendships easily.....	1	2	3	4	5	6	7
17. When looking at a particular situation, I have difficulty in seeing what is more important and what is less important.....	1	2	3	4	5	6	7
18. I'm unable to tell people when they bother me..	1	2	3	4	5	6	7
19. I'm seen as a person who plays a responsible role in most activities.....	1	2	3	4	5	6	7
20. I can face the unpleasant realities of life when they occur from time to time.....	1	2	3	4	5	6	7
21. There are people whom I dislike.....	1	2	3	4	5	6	7
22. If someone kept kicking or bumping my chair in a movie, I would ask him or her politely to stop.....	1	2	3	4	5	6	7
23. I find it difficult to make changes in my daily routine.....	1	2	3	4	5	6	7
24. I would prefer others to make the important decisions for me in my life.....	1	2	3	4	5	6	7
25. I am convinced that there is something wrong with my mind.....	1	2	3	4	5	6	7
26. I am satisfied with my lot.....	1	2	3	4	5	6	7
27. In handling situations which arise, I try to think of as many possible approaches as I can..	1	2	3	4	5	6	7
28. If I was interested in photography I would try to learn as much as I could about it.....	1	2	3	4	5	6	7
29. It's hard for me to tell someone that I like him or her a lot.....	1	2	3	4	5	6	7
30. After thinking of a few possible ways of dealing with a problem, I'm the sort of person who finds it difficult to work out which of the ways is the best.....	1	2	3	4	5	6	7

THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	NEVER	VERY SELDOM	SELDOM	SOMETIMES	OFTEN	VERY OFTEN	ALWAYS
31. I feel sure of myself in most situations.....	1	2	3	4	5	6	7
32. I am convinced that no one has ever understood or will understand me.....	1	2	3	4	5	6	7
33. I tend to take difficult situations too seriously and become overwhelmed.....	1	2	3	4	5	6	7
34. I have done things that I have not felt proud of.....	1	2	3	4	5	6	7
35. Deep down I dislike myself.....	1	2	3	4	5	6	7
36. I believe that one's political thinking should change with the times and circumstances.....	1	2	3	4	5	6	7
37. When it comes to making decisions I prefer to rely on my own thinking rather than on advice from others.....	1	2	3	4	5	6	7
38. I hear voices without knowing where they come from.....	1	2	3	4	5	6	7
39. It's hard for me to enjoy life.....	1	2	3	4	5	6	7
40. When trying to solve a problem, I look at both the pros and cons of each possible solution and then decide on the best course of action.....	1	2	3	4	5	6	7
41. I lack enthusiasm for my interests.....	1	2	3	4	5	6	7
42. I feel that my social relationships are rewarding for both me and my friends alike.....	1	2	3	4	5	6	7
43. It's hard for me to be absolutely sure whether some things have really happened or whether I have dreamt it or just thought that they have happened.....	1	2	3	4	5	6	7
44. I feel helpless when I have to stand up for my rights or express my feelings.....	1	2	3	4	5	6	7

THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	NEVER	VERY SELDOM	SELDOM	SOMETIMES	OFTEN	VERY OFTEN	ALWAYS
45. I would stop and try to help a crying child find his or her parents even though it was important for me to be somewhere else at the time	1	2	3	4	5	6	7
46. When certain situations upset me, I know how to deal with them and try to relax	1	2	3	4	5	6	7
47. There are certain thoughts that I would rather keep to myself	1	2	3	4	5	6	7
48. I'm happy with my physical appearance, with the way I look	1	2	3	4	5	6	7
49. I think that it would be difficult for me to make the necessary adjustments if I were forced to leave my home	1	2	3	4	5	6	7
50. I'm more of a follower than a leader	1	2	3	4	5	6	7
51. Someone is trying to steal my thoughts	1	2	3	4	5	6	7
52. I enjoy myself and feel good in activities like work, companionship, play, faffing around, and so forth	1	2	3	4	5	6	7
53. I believe that if you've decided to do something then you must go ahead and do it	1	2	3	4	5	6	7
54. I make a conscious effort to improve myself and enrich my life	1	2	3	4	5	6	7
55. I'm able to give and receive warmth and affection	1	2	3	4	5	6	7
56. I have had peculiar and strange experiences that cannot be explained	1	2	3	4	5	6	7
57. If a heated discussion arose between two of my friends, it would be hard for me to take a definite stand with the one I think is right	1	2	3	4	5	6	7

THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	NEVER	VERY SELDOM	SELDOM	SOMETIMES	OFTEN	VERY OFTEN	ALWAYS
58. I think that people who don't have children shouldn't pay taxes for education.....	1	2	3	4	5	6	7
59. I can handle tension and stress without getting too nervous or falling apart.....	1	2	3	4	5	6	7
60. I have said or done things that I have regretted.....	1	2	3	4	5	6	7
61. Before I start an exam I find myself thinking that I'm going to fail.....	1	2	3	4	5	6	7
62. I disapprove of the way people are experimenting with sex these days.....	1	2	3	4	5	6	7
63. I avoid clinging to others.....	1	2	3	4	5	6	7
64. Someone or something is controlling my mind....	1	2	3	4	5	6	7
65. I'm discouraged about life.....	1	2	3	4	5	6	7
66. I believe that if at first you don't succeed it's important to try and try again new and different approaches.....	1	2	3	4	5	6	7
67. I feel that I'm growing and moving forward as a person.....	1	2	3	4	5	6	7
68. I make a conscious effort to work for good relations with and between others.....	1	2	3	4	5	6	7
69. I have had periods in which I felt, for no special reason, unusually cheerful or sad.....	1	2	3	4	5	6	7
70. I find it difficult to tell a domineering person that he or she is wrong.....	1	2	3	4	5	6	7
71. I'm satisfied with and enjoy my family.....	1	2	3	4	5	6	7
72. When presented with difficulties, I get too tense to work properly.....	1	2	3	4	5	6	7
73. I have felt like swearing.....	1	2	3	4	5	6	7

THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	NEVER	VERY SELDOM	SELDOM	SOMETIMES	OFTEN	VERY OFTEN	ALWAYS
74. I feel comfortable with my body.....	1	2	3	4	5	6	7
75. My ideas about God and religion are unchangeable.....	1	2	3	4	5	6	7
76. I prefer a job in which I am told pretty much what to do.....	1	2	3	4	5	6	7
77. I think that someone is making me do things by remote control.....	1	2	3	4	5	6	7
78. I can let myself go and enjoy myself at a lively party.....	1	2	3	4	5	6	7
79. When faced with a puzzling situation, I like to collect all the information about it that I can.....	1	2	3	4	5	6	7
80. I try to make my life as meaningful as I can...	1	2	3	4	5	6	7
81. I'm able to introduce myself to strangers without great difficulty.....	1	2	3	4	5	6	7
82. When carrying out a decision and following through with a specific course of action, I find it hard to concentrate and to focus on what I'm doing.....	1	2	3	4	5	6	7
83. When I'm cross with someone I can tell him or her about it.....	1	2	3	4	5	6	7
84. I dislike doing errands and helping around the house.....	1	2	3	4	5	6	7
85. I believe in my ability to handle most of the upsetting problems I encounter.....	1	2	3	4	5	6	7
86. I have been faced with problems in the past....	1	2	3	4	5	6	7
87. I believe that I have control over what happens in my life.....	1	2	3	4	5	6	7

THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	NEVER	VERY SELDOM	SELDOM	SOMETIMES	OFTEN	VERY OFTEN	ALWAYS
88. I can understand that one may love and hate the same person	1	2	3	4	5	6	7
89. I like to plan things on my own	1	2	3	4	5	6	7
90. Someone has been trying to kill me	1	2	3	4	5	6	7
91. I am an unhappy person	1	2	3	4	5	6	7
92. I feel that it's possible to deal effectively with most problematic situations one meets	1	2	3	4	5	6	7
93. I tend to neglect that which I'm interested in	1	2	3	4	5	6	7
94. I believe that expressing one's feelings is a sign of weakness	1	2	3	4	5	6	7
95. Normally I avoid examining the reasons for failing to solve a problem	1	2	3	4	5	6	7
96. It's hard to accept the sexual feelings that surge up within me from time to time	1	2	3	4	5	6	7
97. I have the feeling that I don't owe anyone anything in this world	1	2	3	4	5	6	7
98. When faced with serious problems I get physically tense and fear that I'll lose control	1	2	3	4	5	6	7
99. I have done things that others might think are strange	1	2	3	4	5	6	7
100. I think that I'm basically a good person	1	2	3	4	5	6	7
101. I believe that men should act masculine and that women should act in a feminine way	1	2	3	4	5	6	7
102. I like to do things on my own, without outside help	1	2	3	4	5	6	7

THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	NEVER	VERY SELDOM	SELDOM	SOMETIMES	OFTEN	VERY OFTEN	ALWAYS
103. I see strange animals and people that others do not see	1	2	3	4	5	6	7
104. It's hard for me to smile	1	2	3	4	5	6	7
105. After attempting to deal with some difficulty in a particular way, I'm interested in seeing how my approach worked out	1	2	3	4	5	6	7
106. I love my hobbies	1	2	3	4	5	6	7
107. My friends can tell me intimate things about themselves	1	2	3	4	5	6	7
108. I avoid blowing things up out of proportion	1	2	3	4	5	6	7
109. I'm unable to express my ideas to others	1	2	3	4	5	6	7
110. If I could get away with breaking or bending the law in certain situations I would	1	2	3	4	5	6	7
111. In tight situations I normally come up with a suitable course of action	1	2	3	4	5	6	7
112. I have felt like smashing things	1	2	3	4	5	6	7
113. I'm happy with the type of person I am	1	2	3	4	5	6	7
114. It was (or is) difficult for me to leave home	1	2	3	4	5	6	7
115. If I were involved in a project with two other people, I would rely more on their ideas than they on mine	1	2	3	4	5	6	7
116. I have a feeling that I must injure either myself or someone else	1	2	3	4	5	6	7
117. I like to have fun	1	2	3	4	5	6	7
118. Normally I see change as a challenge and potentially important for further personal development	1	2	3	4	5	6	7

THE DEGREE TO WHICH THE STATEMENT IS TRUE OF ME:	NEVER	VERY SELDOM	SELDOM	SOMETIMES	OFTEN	VERY OFTEN	ALWAYS
119. I try to develop and expand those activities which I enjoy	1	2	3	4	5	6	7
120. I keep my personal problems and troubles to myself	1	2	3	4	5	6	7
121. I try to see things as they really are, without fantasizing or daydreaming about them	1	2	3	4	5	6	7
122. I feel confident when relating to others	1	2	3	4	5	6	7
123. I've been told that I don't have a strong sense of responsibility	1	2	3	4	5	6	7
124. I try to test out my ideas to see if that's the way things really are	1	2	3	4	5	6	7
125. It annoys me when others interrupt or otherwise disturb me when I'm working on something which is very important to me	1	2	3	4	5	6	7
126. It's hard for me to accept myself just the way I am	1	2	3	4	5	6	7
127. I think that there's only one real way of looking at most things in life	1	2	3	4	5	6	7
128. I seem to need others more than they need me	1	2	3	4	5	6	7
129. I feel cut off from my body	1	2	3	4	5	6	7
130. It's easy for me to laugh	1	2	3	4	5	6	7
131. I responded to every item in this inventory openly and honestly	1	2	3	4	5	6	7

APPENDIX H: THE SIXTEEN PERSONALITY FACTOR QUESTIONNAIRE (16PF)

WHAT TO DO: In this section there are some questions to see what attitudes and interests you have. There are no "right" and "wrong" answers because everyone has the right to his or her own views. Answer them exactly and truly. There are three possible answers to each question. Draw a circle around the number "1" if your choice is the "1" answer, around the number "2" if this your answer choice, and around the number "3" if you choose the "3" answer. Now look at the four sample questions below so that you can see whether you understand the instructions before starting.

EXAMPLES:

1. I like to watch games:
   1. yes, 2. occasionally, 3. no.

2. I prefer people who:
   1. are reserved, 2. (are) in between, 3. make friends quickly.

3. Money cannot bring happiness:
   1. yes (true), 2. in between, 3. no (false).

4. Woman is to child as cat is to:
   1. kitten, 2. dog, 3. boy.

In the last example there is a right answer--kitten. But there are very few such reasoning questions.

1. You are asked not to spend time pondering. Give the first, natural answer as it comes to you. Of course, the questions are too short to give you all the particulars you would sometimes like to have. For instance, the above item asks you about "team games" and you might be fonder of rugby than netball. But you are to reply "for the average game", or to strike an average in situations of the kind stated. Give the best answer you can at a rate not slower than five or six a minute. You should finish in a little more than half an hour.

2. Try not to fall back on the middle, "uncertain" answers except when the answer at either end is really impossible for you--perhaps once every two or three questions.

3. Be sure not to skip anything, but answer every question, somehow. Some may not apply to you very well, but give your best guess. Some may seem personal; but remember that the answers are kept confidential. Answers to particular questions are not inspected.

4. Answer as honestly as possible what is true of you. Do not merely mark what seems "the right thing to say" to make an impression.

* PLEASE BEGIN ON THE FOLLOWING PAGE *

1. I have the instructions for this test clearly in mind:
   1. yes, 2. uncertain, 3. no.

2. I am ready to answer each question as truthfully as possible:
   1. yes, 2. uncertain, 3. no.

3. It would be good for everyone if vacations (holidays) were longer and everyone had to take them:
   1. agree, 2. uncertain, 3. disagree.

4. I can find enough energy to face my difficulties:
   1. always, 2. generally, 3. seldom.

5. I feel a bit nervous of wild animals even when they are in strong cages:
   1. yes (true), 2. uncertain, 3. no (false).

6. I hold back from criticizing people and their ideas:
   1. yes, 2. sometimes, 3. no.

7. I make smart, sarcastic remarks to people if I think they deserve it:
   1. generally, 2. sometimes, 3. never.

8. I prefer semiclassical music to popular tunes:
   1. true, 2. uncertain, 3. false.

9. If I saw two neighbours' children fighting, I would:
   1. leave them to settle it, 2, uncertain, 3. reason with them.

10. On social occasions I:
    1. readily come forward, 2. respond in between, 3. prefer to stay quietly in the background.

11. I would rather be:
    1. a construction engineer, 2. uncertain, 3. a teacher of social studies.

12. I would rather spend a free evening:
    1. with a good book, 2. uncertain, 3. working on a hobby with friends.

13. I can generally put up with conceited people, even though they brag or show they think too well of themselves:
    1. yes, 2. in between, 3. no.

14. I'd rather that the person I marry be socially admired than gifted in art or literature:
    1. true, 2. uncertain, 3. false.

15. I sometimes get an unreasonable dislike for a person:
    1. but it is so slight I can hide it easily, 2. in between, 3. which is so definite that I tend to express it.

16. In a situation which may become dangerous I believe in making a fuss and speaking up even if calmness and politeness are lost:
1. yes, 2. in between, 3. no.

17. I am always keenly aware of attempts at propaganda in things I read:
1. yes, 2. uncertain, 3. no.

18. I wake up in the night and, through worry, have difficulty in sleeping again:
1. often, 2. sometimes, 3. never.

19. I don't feel guilty if scolded for something I did not do:
1. true, 2. uncertain, 3. false.

20. I am considered a liberal "dreamer" of new ways rather than a practical follower of well-tried ways:
1. true, 2. uncertain, 3. false.

21. I find that my interests in people and amusement tend to change fairly rapidly:
1. yes, 2. in between, 3. no.

22. In constructing something I would rather work:
1. with a committee, 2. uncertain, 3. on my own.

23. I find myself counting things, for no particular purpose:
1. often, 2. occasionally, 3. never.

24. When talking I like:
1. to say things, just as they occur to me, 2. in between, 3. to get my thoughts well organized first.

25. I never feel the urge to doodle and fidget when kept sitting still at a meeting:
1. true, 2. uncertain, 3. false.

26. with the same hours and pay, I would prefer the life of:
1. a carpenter or cook, 2. uncertain, 3. a waiter in a good restaurant.

27. With acquaintances I prefer:
1. to keep to matter-of-fact impersonal things, 2. in between, 3. to chat about people and their feelings.

28. "Spade" is to "dig" as "knife" is to:
1. sharp, 2. cut, 3. shovel.

29. I sometimes can't get to sleep because an idea keeps running through my mind:
1. true, 2. uncertain, 3. false.

30. In my personal life I reach the goals I set, almost all the time:
1. true, 2. uncertain, 3. false.

31. When telling a person a deliberate lie I have to look away being ashamed to look him or her in the eyes:
1. true, 2. uncertain, 3. false.

32. I am uncomfortable when I work on a project requiring quick action affecting others:
1. true, 2. in between, 3. false.

33. Most of the people I know would rate me as an amusing talker:
1. yes, 2. uncertain, 3. no.

34. Many ordinary people would be shocked if they knew my inner opinions:
1. yes, 2. uncertain, 3. no.

35. I get slightly embarrassed if I suddenly become the focus of attention in a social group:
1. yes, 2. in between, 3. no.

36. I am always glad to join a large gathering, for example, a party, dance, or public meeting:
1. yes, 2. in between, 3. no.

37. In school I preferred (or prefer):
1. music, 2. uncertain, 3. handwork and crafts.

38. I believe most people are a little "queer" mentally though they do not like to admit it:
1. yes, 2. in between, 3. no.

39. I like a friend (of my sex) who:
1. seriously thinks out his or her attitudes to life, 2. in between, 3. is efficient and practical in his or her interests.

40. "If at first you don't succeed, try, try, again," is a motto completely forgotten in the modern world:
1. yes, 2. uncertain, 3. no.

41. I feel a need every now and then to engage in a tough physical activity:
1. yes, 2. in between, 3. no.

42. I would rather mix with polite people than rough, rebellious individuals:
1. yes, 2. in between, 3. no.

43. In intellectual interests, my parents are (were):
1. a bit bellow average, 2. average, 3. above average.

44. When I am called in by my boss (or teacher), I:
1. see a chance to put in a good word for things I am concerned about, 2. in between, 3. fear something has gone wrong.

45. I feel a strong need for someone to lean on in times of sadness:
1. yes, 2. in between, 3. no.

46. I occasionally get puzzled when looking in a mirror, as to the meaning of right and left:
1. true, 2. uncertain, 3. false.

47. As a teenager, I joined in school sports:
1. occasionally, 2. fairly often, 3. a great deal.

48. I would rather stop in the street to watch an artist painting than listen to some people having a quarrel:
1. true, 2. uncertain, 3. false.

49. I sometimes get in a state of tension and turmoil as I think of the day's happenings:
1. yes, 2. in between, 3. no.

50. I sometimes doubt whether people I am talking to are really interested in what I am saying:
1. yes, 2. in between, 3. no.

51. I would like to be:
1. a forester, 2. uncertain, 3. a teacher.

52. For special holidays and birthdays, I:
1. like to give personal presents, 2. uncertain, 3. feel that buying presents is a bit of a nuisance.

53. "Tired" is to "work" as "proud" is to:
1. rest, 2. success, 3. exercise.

54. Which of the following items is different in kind from the others?
1. candle, 2. moon, 3. electric light.

55. I admire my parents in all important matters:
1. yes, 2. uncertain, 3. no.

56. I have some characteristics in which I feel definitely superior to most people:
1. yes, 2. uncertain, 3. no.

57. I doubt my ability to do ordinary things as well as other people:
1. generally, 2. often, 3. occasionally.

58. I like to go out to a show or entertainment:
1. more than once a week (more than average), 2. about once a week (average), 3. less than once a week (less than average).

59. I think that plenty of freedom is more important than good manners and respect for the law:
1. true, 2. uncertain, 3. false.

60. I tend to keep quiet in the presence of senior persons (people of greater experience, age, or rank):
1. yes, 2. in between, 3. no.

61. I find it hard to address or recite to a large group:
1. yes, 2. in between, 3. no.

62. I would rather live in a town:
1. which is rough, prosperous, and booming, 2. uncertain,
3. artistically laid out, but relatively poor.

63. If I make an awkward social mistake, I can soon forget it:
1. yes, 2. in between, 3. no.

64. When I read an unfair magazine article, I am more inclined to forget it than to feel like "hitting back":
1. true, 2. uncertain, 3. false.

65. My memory tends to drop a lot of unimportant trivial things, for example, names of streets or stores in town:
1. yes, 2. in between, 3. no.

66. I am considered a person easily swayed by appeals to my feelings:
1. yes, 2. in between, 3. no.

67. I eat my food with gusto, not always so carefully and properly as some:
1. true, 2. uncertain, 3. false.

68. I generally keep up hope in ordinary difficulties:
1. yes, 2. uncertain, 3. no.

69. People sometimes warn me that I show my excitement in voice and manner too obviously:
1. yes, 2. in between, 3. no.

70. As a teenager, if I differed in opinion from my parents, I usually:
1. kept my own opinion, 2. in between, 3. accepted their authority.

71. I prefer to marry someone who can:
1. keep the family interested in its own activities, 2. in between, 3. make the family a part of the social life of the neighbourhood.

72. I would rather enjoy life quietly in my own way than be admired for my achievements:
1. true, 2. uncertain, 3. false.

73. I can work carefully on most things being bothered by people making
1. yes, 2. in between, 3. no.

74. I feel that on one or two occasions recently I have been blamed more than I really deserve:
1. yes, 2. in between, 3. no.

75. I am always able to keep the expressions of my feelings under exact control:
1. yes, 2. in between, 3. no.

76. In starting a useful invention, I would prefer:
1. working on it in the laboratory, 2. uncertain, 3. selling it to people.

77. "Surprise" is to "strange" as "fear" is to:
1. brave, 2. anxious, 3. terrible.

78. Which of the following fractions is not in the same class as the others?
1. 3/7, 2. 3/9, 3. 3/11.

79. Some people seem to ignore or avoid me, although I don't know why:
1. true, 2, uncertain, 3. false.

80. People treat me less reasonably than my good intentions deserve:
1. often, 2. occasionally, 3. never.

81. The use of foul language, even when it is not in a mixed group of men and women, still disgusts me:
1. yes, 2. in between, 3. no.

82. I have decidedly fewer friends than most people:
1. yes, 2. in between, 3. no.

83. I would hate to be where there wouldn't be a lot of people to talk to:
1. true, 2. uncertain, 3. false.

84. People sometimes call me careless, even though they think me an attractive person:
1. yes, 2. in between, 3. no.

85. My reserve always stands in the way when I want to speak to an attractive stranger of the opposite sex:
1. yes, 2. in between, 3. no.

86. I would rather have a job with:
1. a fixed, certain salary, 2. in between, 3. a larger salary, but depending on my constantly persuading people I am worth it.

87. I prefer reading:
1. a realistic account of military or political battles,
2. uncertain, 3. a sensitive, imaginative novel.

88. When bossy people try to "push me around", I do just the opposite of what they wish:
1. yes, 2. in between, 3. no.

89. Most people would be "better off" if given more praise instead of more criticism:
1. true, 2. uncertain, 3. false.

90. In discussing art, religion, or politics, I seldom get so involved or excited I forget politeness and human relations:
1. true, 2. uncertain, 3. false.

91. If someone got mad at me, I would:
1. try to calm him or her down, 2. uncertain, 3. get irritated.

92. I would like to see a move toward:
1. eating more vegetable foods, to avoid killing so many animals, 2. uncertain, 3. getting better poisons to kill the animals which ruin farmers' crops (such as squirrels, rabbits, and some kinds of birds).

93. If acquaintances treat me badly and show they dislike me:
1. it does not upset me a bit, 2. in between, 3. I tend to get downhearted.

94. Careless folks who say "the best things in life are free" usually haven't worked to get much:
1. true, 2. in between, 3. false.

95. Because it is not always possible to get things done by gradual, reasonable methods, it is sometimes necessary to use force:
1. true, 2. in between, 3. false.

96. At fifteen or sixteen I went about with the opposite sex:
1. a lot, 2. as much as most people, 3. less than most people.

97. I like to take an active part in social affairs, committee work, etc.:
1. yes, 2. in between, 3. no.

98. The idea that sickness comes as much from mental as physical causes is much exaggerated:
1. yes, 2. in between, 3. no.

99. Quite small setbacks occasionally irritate me too much:
1. yes, 2. in between, 3. no.

100. I very rarely blurt out annoying remarks that hurt people's feelings:
1. true, 2. uncertain, 3. false.

101. I would prefer to work in a business:
1. talking to customers, 2. in between, 3. keeping office accounts and records.

102. "Size" is to "length" as "dishonest" is to:
1. prison, 2. sin, 3. stealing.

103. AB is to dc as SR is to:
1. qp, 2. pq, 3. tu.

104. When people are unreasonable, I just:
1. keep quiet, 2. in between, 3. despise them.

105. If people talk loudly while I am listening to music, I:
1. can keep my mind on the music and not be bothered, 2. in between, 3. find it spoils my enjoyment and annoys me.

106. I think I am better described as:
1. polite and quiet, 2. in between, 3. forceful.

107. I attend social functions only when I have to, and stay away any other time:
1. yes, 2. uncertain, 3. no.

108. To be cautious and expect little is better than to be happy at heart, always expecting success:
1. true, 2. uncertain, 3. false.

109. In thinking of difficulties in my work, I:
1. try to plan ahead, before I meet them, 2. in between, 3. assume I can handle them when they come.

110. I have at least as many friends of the opposite sex as of my own:
1. yes, 2. in between, 3. no.

111. Even in an important game I am more concerned to enjoy it that win:
1. always, 2. generally, 3. occasionally.

112. I would rather be:
1. a guidance worker with young people seeking careers, 2. uncertain, 3. a manager in a technical manufacturing concern.

113. If I am quite sure that a person is unjust or behaving selfishly, I show him or her up, even if it takes some trouble:
1. yes, 2. in between, 3. no.

114. Some people criticize my sense of responsibility:
1. yes, 2. uncertain, 3. no.

115. I would enjoy being a newspaper writer on drama, concerts, opera, etc.:
1. yes, 2. uncertain, 3. no.

116. I find it embarrassing to have praise or compliments bestowed on me:
1. yes, 2. in between, 3. no.

117. I think it is more important in the modern world to solve:
1. the political difficulties, 2. uncertain, 3. the question of moral purpose.

118. I occasionally have a sense of vague danger or sudden dread for no sufficient reason:
1. yes, 2, in between, 3. no.

119. As a child I feared the dark:
1. often, 2. sometimes, 3. never.

120. On a free evening I like to:
1. see an historical film about past adventures, 2. uncertain, 3. read science fiction or an essay on "The Future of Science".

121. It bothers me if people think I am being too unconventional or odd:
1. a lot, 2. somewhat, 3. not at all.

122. Most people would be happier if they lived more with their fellows and did the same things as others:
1. yes, 2. in between, 3. no.

123. I like to go my own way instead of acting on approved rules:
1. true, 2. uncertain, 3. false.

124. Often I get angry with people too quickly:
1. yes, 2. in between, 3. no.

125. When something really upsets me, I generally calm down again quite quickly:
1. yes, 2. in between, 3. no.

126. If the earnings were the same, I would rather be:
1. a lawyer, 2. uncertain, 3. a navigator or pilot.

127. "Better" is to "worst" as "slower" is to:
1. fast, 2. best, 3. quickest.

128. Which of the following should come next at the end of this row of letters: xooooxxoooxxx?
1. xox, 2. oox, 3. oxx.

129. When the time comes for something I have planned and looked forward to, I occasionally do not feel up to going:
1. true, 2. in between, 3. false.

130. I could enjoy the life of an animal doctor, handling disease and surgery of animals:
1. yes, 2. in between, 3. no.

131. I occasionally tell strangers things that seem to me important, regardless of whether they ask about them:
1. yes, 2. in between, 3. no.

132. I spend much of my spare time talking with friends over social events enjoyed in the past:
1. yes, 2. in between, 3. no.

133. I enjoy doing "daring", foolhardy things "just for fun":
1. yes, 2. in between, 3. no.

134. I think the police can be trusted not to ill-treat innocent people:
1. yes, 2. in between, 3. no.

135. I consider myself a very sociable, outgoing person:
1. yes, 2. in between, 3. no.

136. In social contacts I:
1. show my emotions as I wish, 2. in between, 3. keep my emotions to myself.

137. I enjoy music that is:
1. light, dry, and brisk, 2. in between, 3. emotional and sentimental.

138. I try to make my laughter at jokes quieter than most people's:
1. yes, 2. in between, 3. no.

139. I admire the beauty of a fairy tale more than that of a well-made gun:
1. yes, 2. uncertain, 3. no.

140. Hearing different beliefs about right and wrong is:
1. always interesting, 2. something we cannot avoid, 3. bad for most people.

141. I am always interested in mechanical matters, for example, in cars and airplanes:
1. yes, 2. in between, 3. no.

142. I like to tackle problems that other people have made a mess of:
1. yes, 2. in between, 3. no.

143. I am properly regarded as only a plodding, half-successful person:
1. yes, 2. uncertain, 3. no.

144. If people take advantage of my friendliness, I do not resent it and I soon forget:
1. true, 2. uncertain, 3. false.

145. I think the spread of birth control is essential to solving the world's economic and peace problems:
1. yes, 2. uncertain, 3. no.

146. I like to do my planning alone, without interruptions and suggestions from others:
1. yes, 2. in between, 3. no.

147. I sometimes let actions get swayed by feelings of jealousy:
1. yes, 2. in between, 3. no.

148. I believe firmly "the boss may not always be right, but he always has the right to be boss":
1. yes, 2. uncertain, 3. no.

149. I tend to tremble or perspire when I think of a difficult task ahead:
1. generally, 2. occasionally, 3. never.

150. If people shout suggestions when I'm playing a game, it does not upset me:
1. true, 2. uncertain, 3. false.

151. I would prefer the life of:
1. an artist, 2. uncertain, 3. a secretary running a social club.

152. Which of the following words does not properly belong with the others?
1. any, 2. some, 3. most.

153. "Flame" is to "heat" as "rose" is to:
1. thorn, 2. red petals, 3. scent.

154. I have vivid dreams, disturbing my sleep:
1. often, 2. occasionally, 3. practically never.

155. If the odds are really against something's being a success, I still believe in taking the risk:
1. yes, 2. in between, 3. no.

156. I like it when I know so well what the group has to do that I naturally become the one in command:
1. yes, 2. in between, 3. no.

157. I would rather dress with quiet correctness than with eye-catching personal style:
1. true, 2. uncertain, 3. false.

158. An evening with a quiet hobby appeals to me more than a lively party:
1. true, 2. uncertain, 3. false.

159. I close my mind to well-meant suggestions of others, even though I know I shouldn't:
1. occasionally, 2. hardly ever, 3. never.

160. I always make a point, in deciding anything, to refer to basic rules of right and wrong:
1. yes, 2. in between, 3. no.

161. I somewhat dislike having a group watch me at work:
1. yes, 2. in between, 3. no.

162. I keep my room smartly organized, with things in known places almost all the time:
1. yes, 2. in between, 3. no.

163. In school I preferred:
1. English, 2. uncertain, 3. mathematics or arithmetic.

164. I have sometimes been troubled by people saying bad things about me behind my back, with no grounds at all:
1. yes, 2. uncertain, 3. no.

165. Talk with ordinary, habit-bound, conventional people:
1. is often quite interesting and has a lot to it, 2. in between,
3. annoys me because it deals with trifles and lacks depth.

166. I like to:
1. have a circle of warm friendships, even if they are demanding,
2. in between, 3. be free of personal entanglements.

167. I think it is wiser to keep the nation's military forces strong than just to depend on international goodwill:
1. yes, 2. in between, 3. no.

168. People regard me as a solid, undisturbed person, unmoved by ups and downs in circumstances:
1. yes, 2. in between, 3. no.

169. I think society should let reason lead it to new customs and throw aside old habits or mere traditions:
1. yes, 2. in between, 3. no.

170. My viewpoints change in an uncertain way because I trust my feelings more than logical reasoning:
1. true, 2. to some extent, 3. false.

171. I learn better by:
1. reading a well-written book, 2. in between, 3. joining a group discussion.

172. I have periods when it's hard to stop a mood of self-pity:
1. often, 2. occasionally, 3. never.

173. I like to wait till I am sure that what I am saying is correct, before I put forth an argument:
1. always, 2. generally, 3. only if it's practical.

174. Small things sometimes "get on my nerves" unbearably though I realize them to be trivial:
1. yes, 2. in between, 3. no.

175. I don't say things on the spur of the moment that I greatly regret:
1. true, 2. uncertain, 3. false.

176. If asked to work with a charity drive, I would:
1. accept, 2. uncertain, 3. politely say I'm busy.

177. Which of the following words does not belong with the others?
1. wide, 2. zigzag, 3. regular.

178. "Soon" is to "never" as "near" is to:
1. nowhere, 2. far, 3. next.

179. I have a good sense of direction (find it easy to tell which is North, South, East, or West) when in a strange place:
1. yes, 2. in between, 3. no.

180. I am know as an "idea man" who almost always puts forward some ideas on a problem:
1. yes, 2. in between, 3. no.

181. I think I am better at showing:
1. nerve in meeting challenges, 2. uncertain, 3. tolerance of other people's wishes.

182. I am considered a very enthusiastic person:
1. yes, 2. in between, 3. no.

183. I like a job that offers change, variety, and travel, even if it involves some danger:
1. yes, 2. in between, 3. no.

184. I am a fairly strict person, insisting on always doing things as correctly as possible:
1. true, 2. in between, 3. false.

185. I enjoy work that requires conscientious, exacting skills:
1. yes, 2. in between, 3. no.

186. I'm the energetic type who keeps busy:
1. yes, 2. uncertain, 3. no.

187. I am sure there are no questions that I have skipped or failed to answer properly:
1. yes, 2. uncertain, 3. no.

* PLEASE RETURN THIS BOOKLET TO YOUR TUTOR OR TO THE PSYCHOLOGY DEPARTMENT *

* THANK YOU VERY MUCH FOR YOUR COOPERATION *

APPENDIX I: THE PERSONAL ORIENTATION INVENTORY (POI)

DIRECTIONS:

This section consists of pairs of numbered statements. Read each statement, and decide which of the two paired statements most consistently applies to you.

If the first statement of the pair is TRUE or MOSTLY TRUE as applied to you, circle number "1".

EXAMPLE: 151. 1. I like team sports.
2. I don't like team sports.

If the second statement of the pair is TRUE or MOSTLY TRUE as applied to you, circle number "2".

EXAMPLE: 152. 1. I like eating in expensive restaurants.
2. I don't like eating in expensive restaurants.

Erase or cross out any answer you wish to change, and then circle the more appropriate statement.

Remember, try to make some answer to every statement. Give YOUR OWN opinion of yourself.

NOW START WITH QUESTION 1

1. 1. I am bound by the principle of fairness.
2. I am not absolutely bound by the principle of fairness.

2. 1. When a friend does me a favour, I feel that I must return it.
2. When a friend does me a favour, I do not feel that I must return it.

3. 1. I feel I must always tell the truth.
2. I do not always tell the truth.

4. 1. No matter how hard I try, my feelings are often hurt.
2. If I manage the situation right, I can avoid being hurt.

5. 1. I feel that I must strive for perfection in everything that I undertake.
2. I do not feel that I must strive for perfection in everything that I undertake.

6. 1. I often make decisions spontaneously.
2. I seldom make my decisions spontaneously.

7. 1. I am afraid to be myself.
   2. I am not afraid to be myself.

8. 1. I feel obligated when a stranger does me a favour.
   2. I do not feel obligated when a stranger does me a favour.

9. 1. I feel that I have a right to expect others to do what I want of them.
   2. I do not feel that I have a right to expect others to do what I want of them.

10. 1. I live by values which are in agreement with others.
    2. I live by values which are primarily based on my own feelings.

11. 1. I am concerned with self-improvement at all times.
    2. I am not concerned with self-improvement at all times.

12. 1. I feel guilty when I am selfish.
    2. I don't feel guilty when I am selfish.

13. 1. I have no objection to getting angry.
    2. Anger is something I try to avoid.

14. 1. For me, anything is possible if I believe in myself.
    2. I have a lot of natural limitations even though I believe in myself.

15. 1. I put others' interests before my own.
    2. I do not put others' interests before my own.

16. 1. I sometimes feel embarrassed by compliments.
    2. I am not embarrassed by compliments.

17. 1. I believe it is important to accept others as they are.
    2. I believe it is important to understand why others are as they are.

18. 1. I can put off until tomorrow what I ought to do today.
    2. I don't put off until tomorrow what I ought to do today.

19. 1. I can give without requiring the other person to appreciate what I give.
    2. I have a right expect the other person to appreciate what I give.

20. 1. My moral values are dictated by society.
    2. My moral values are self-determined.

21. 1. I do what others expect of me.
    2. I feel free to not do what others expect of me.

22. 1. I accept my weaknesses.
    2. I don't accept my weaknesses.

23. 1. In order to grow emotionally, it is necessary to know why I act as I do.
    2. In order to grow emotionally, it is not necessary to know why I act as I do.

24. 1. Sometimes I am cross when I am not feeling well.
    2. I am hardly ever cross.

25. 1. It is necessary that others approve of what I do.
    2. It is not always necessary that others approve of what I do.

26. 1. I am afraid of making mistakes.
    2. I am not afraid of making mistakes.

27. 1. I trust the decisions I make spontaneously.
    2. I do not trust the decisions I make spontaneously.

28. 1. My feelings of self-worth depend on how much I accomplish.
    2. My feelings of self-worth do not depend on how much I accomplish.

29. 1. I fear failure.
    2. I don't fear failure.

30. 1. My moral values are determined, for the most part, by the thoughts, feelings and decisions of others.
    2. My moral values are not determined, for the most part, by the thoughts, feelings and decisions of others.

31. 1. It is possible to live life in terms of what I want to do.
    2. It is not possible to live life in terms of what I want to do.

32. 1. I can cope with the ups and downs of life.
    2. I cannot cope with the ups and downs of life.

33. 1. I believe in saying what I feel in dealing with others.
    2. I do not believe in saying what I feel in dealing with others.

34. 1. Children should realize that they do not have the same rights and privileges as adults.
    2. It is not important to make an issue of rights and privileges.

35. 1. I can "stick my neck out" in my relations with others.
    2. I avoid "sticking my neck out" in my relations with others.

36. 1. I believe the pursuit of self-interest is opposed to interests in others.
    2. I believe the pursuit of self-interest is not opposed to interests in others.

37. 1. I find that I have rejected many of the moral values I was taught.
    2. I have not rejected any of the moral values I was taught.

38. 1. I live in terms of my wants, likes, dislikes and values.
    2. I do not live in terms of my wants, likes, dislikes and values.

39. 1. I trust my ability to size up a situation.
    2. I do not trust my ability to size up a situation.

40. 1. I believe I have an innate capacity to cope with life.
    2. I do not believe I have an innate capacity to cope with life.

41. 1. I must justify my actions in the pursuit of my own interests.
    2. I need not justify my actions in the pursuit of my own interests.

42. 1. I am bothered by fears of being inadequate.
    2. I am not bothered by fears of being inadequate.

43. 1. I believe that man is essentially good and can be trusted.
    2. I believe that man is essentially evil and cannot be trusted.

44. 1. I live by the rules and standards of society.
    2. I do not always need to live by the rules and standards of society.

45. 1. I am bound by my duties and obligations to others.
    2. I am not bound by my duties and obligations to others.

46. 1. Reasons are needed to justify my feelings.
    2. Reasons are not needed to justify my feelings.

47. 1. There are times when just being silent is the best way I can express my feelings.
    2. I find it difficult to express my feelings by just being silent.

48. 1. I often feel it necessary to defend my past actions.
    2. I do not feel it necessary to defend my past actions.

49. 1. I like everyone I know.
    2. I do not like everyone I know.

50. 1. Criticism threatens my self-esteem.
    2. Criticism does not threaten my self-esteem.

51. 1. I believe that knowledge of what is right makes people act right.
    2. I do not believe that knowledge of what is right necessarily makes people act right.

52. 1. I am afraid to be angry at those I love.
    2. I feel free to be angry at those I love.

53. 1. My basic responsibility is to be aware of my own needs.
    2. My basic responsibility is to be aware of others' needs.

54. 1. Impressing others is most important.
    2. Expressing myself is most important.

55. 1. To feel right, I need always to please others.
    2. I can feel right without always having to please others.

56. 1. I will risk a friendship in order to say or do what I believe is right.
    2. I will not risk a friendship just to say or do what is right.

57. 1. I feel bound to keep the promises I make.
    2. I do not always feel bound to keep the promises I make.

58. 1. I must avoid sorrow at all costs.
    2. It is not necessary for me to avoid sorrow.

59. 1. I strive always to predict what will happen in the future.
    2. I do not feel it necessary always to predict what will happen in the future,

60. 1. It is important that others accept my point of view.
    2. It is not necessary for others to accept my point of view.

61. 1. I only feel free to express warm feelings to my friends.
    2. I feel free to express both warm and hostile feelings to my friends.

62. 1. There are many times when it is more important to express feelings than to carefully evaluate the situation.
    2. There are very few times when it is more important to express feelings than to carefully evaluate the situation.

63. 1. I welcome criticism as an opportunity for growth.
    2. I do not welcome criticism as an opportunity for growth.

64. 1. Appearances are all-important.
    2. Appearances are not terribly important.

65. 1. I hardly ever gossip.
    2. I gossip a little at times.

66. 1. I feel free to reveal my weaknesses among friends.
    2. I do not feel free to reveal my weaknesses among friends.

67. 1. I should always assume responsibility for other people's feelings.
    2. I need not always assume responsibility for other people's feelings.

68. 1. I feel free to be myself and bear the consequences.
    2. I do not feel free to be myself and bear the consequences.

69. 1. I already know all I need to know about my feelings.
    2. As life goes on, I continue to know more and more about my feelings.

70. 1. I hesitate to show my weaknesses among strangers.
    2. I do not hesitate to show my weaknesses among strangers.

71. 1. I will continue to grow only by setting my sights on a high-level, socially approved goal.
    2. I will continue to grow best by being myself.

72. 1. I accept inconsistencies within myself.
    2. I cannot accept inconsistencies within myself.

73. 1. Man is naturally cooperative.
    2. Man is naturally antagonistic.

74. 1. I don't mind laughing at a dirty joke.
    2. I hardly ever laugh at a dirty joke.

75. 1. Happiness is a by-product in human relationships.
    2. Happiness is an end in human relationships.

76. 1. I only feel free to show friendly feelings to strangers.
    2. I feel free to show both friendly and unfriendly feelings to strangers.

77. 1. I try to be sincere but I sometimes fail.
    2. I try to be sincere and I am sincere.

78. 1. Self-interest is natural.
    2. Self-interest in unnatural.

79. 1. A neutral party can measure a happy relationship by observation.
    2. A neutral party cannot measure a happy relationship by observation.

80. 1. For me, work and play are the same.
    2. For me, work and play are opposites.

81. 1. Two people will get along best if each concentrates on pleasing the other.
    2. Two people can get along best if each person feels free to express himself.

82. 1. I have feelings of resentment about things that are past.
    2. I do not have feelings of resentment about things that are past.

83. 1. I like only masculine men and feminine women.
    2. I like men and women who show masculinity as well as femininity.

84. 1. I actively attempt to avoid embarrassment whenever I can.
    2. I do not actively attempt to avoid embarrassment.

85. 1. I blame my parents for a lot of my troubles.
    2. I do not blame my parents for my troubles.

86. 1. I feel that a person should be silly only at the right time and place.
    2. I can be silly when I feel like it.

87. 1. People should always repent their wrong-doings.
2. People need not always repent their wrong-doings.

88. 1. I worry about the future.
2. I do not worry about the future.

89. 1. Kindness and ruthlessness must be opposites.
2. Kindness and ruthlessness need not be opposites.

90. 1. I prefer to save good things for future use.
2. I prefer to use good things now.

91. 1. People should always control their anger.
2. People should express honestly-felt anger.

92. 1. The truly spiritual man is sometimes sensual.
2. The truly spiritual man is never sensual.

93. 1. I am able to express my feelings even when they sometimes result in undesirable consequences.
2. I am unable to express my feelings if they are likely to result in undesirable consequences.

94. 1. I am often ashamed of some of the emotions that I feel bubbling up within me.
2. I do not feel ashamed of my emotions.

95. 1. I have had mysterious or ecstatic experiences.
2. I have never had mysterious or ecstatic experiences.

96. 1. I am orthodoxly religious.
2. I am not orthodoxly religious.

97. 1. I am completely free of guilt.
2. I am not free of guilt.

98. 1. I have a problem in fusing sex and love.
2. I have no problem in fusing sex and love.

99. 1. I enjoy detachment and privacy.
2. I do not enjoy detachment and privacy.

100. 1. I feel dedicated to my work.
2. I do not feel dedicated to my work.

101. 1. I can express affection regardless of whether it is returned.
2. I cannot express affection unless I am sure it will be returned.

102. 1. Living for the future is an important as living for the moment.
2. Only living for the moment is important.

103. 1. It is better to be yourself.
2. It is better to be popular.

104. 1. Wishing and imagining can be bad.
2. Wishing and imagining are always good.

105. 1. I spend more time preparing to live.
2. I spend more time actually living.

106. 1. I am loved because I give love.
2. I am loved because I am lovable.

107. 1. When I really love myself, everybody will love me.
2. When I really love myself, there will still be those who won't love me.

108. 1. I can let other people control me.
2. I can let other people control me if I am sure they will not continue to control me.

109. 1. As they are, people sometimes annoy me.
2. As they are, people do not annoy me.

110. 1. Living for the future gives my life its primary meaning.
2. Only when living for the future ties into living for the present does my life have meaning.

111. 1. I follow diligently the motto, "Don't waste your time."
2. I do not feel bound by the motto, "Don't waste your time."

112. 1. What I have been in the past dictates the kind of person I will be.
2. What I have been in the past does not necessarily dictate the kind of person I will be.

113. 1. It is important to me how I live in the here and now.
2. It is of little importance to me how I live in the here and now.

114. 1. I have had an experience where life seemed just perfect.
2. I have never had an experience where life seemed just perfect.

115. 1. Evil is the result of frustration in trying to be good.
2. Evil is an intrinsic part of human nature which fights good.

116. 1. A person can completely change his or her essential nature.
2. A person can never change his or her essential nature.

117. 1. I am afraid to be tender.
2. I am not afraid to be tender.

118. 1. I am assertive and affirming.
2. I am not assertive and affirming.

119. 1. Women should be trusting and yielding.
2. Women should not be trusting and yielding.

120. 1. I see myself as others see me.
2. I do not see myself as others see me.

121. 1. It is a good idea to think about your greatest potential.
2. A person who thinks about his greatest potential gets conceited.

122. 1. Men should be assertive and affirming.
2. Men should not be assertive and affirming.

123. 1. I am able to risk being myself.
2. I am not able to risk being myself.

124. 1. I feel the need to be doing something significant all of the time.
2. I do not feel the need to be doing something significant all of the time.

125. 1. I suffer from memories.
2. I do not suffer from memories.

126. 1. Men and women must be both yielding and assertive.
2. Men and women must not be both yielding and assertive.

127. 1. I like to participate actively in intense discussions.
2. I do not like to participate actively in intense discussions.

128. 1. I am self-sufficient.
2. I am not self-sufficient.

129. 1. I like to withdraw from others for extended periods of time.
2. I do not like to withdraw from others for extended periods of time.

130. 1. I always play fair.
2. Sometimes I cheat a little.

131. 1. Sometimes I feel so angry I want to destroy or hurt others.
2. I never feel so angry that I want to destroy or hurt others.

132. 1. I feel certain and secure in my relationships with others.
2. I feel uncertain and insecure in my relationships with others.

133. 1. I like to withdraw temporarily from others.
2. I do not like to withdraw temporarily from others.

134. 1. I can accept my mistakes.
2. I cannot accept my mistakes.

135. 1. I find some people who are stupid and uninteresting.
2. I never find any people who are stupid and uninteresting.

136. 1. I regret my past.
2. I do not regret my past.

137. 1. Being myself if helpful to others.
2. Just being myself is not helpful to others.

138. 1. I have had moments of intense happiness when I felt like I was experiencing a kind of ecstasy or bliss.
2. I have not had moments of intense happiness when I felt like I was experiencing a kind of bliss.

139. 1. People have an instinct for evil.
2. People do not have an instinct for evil.

140. 1. For me, the future usually seems hopeful.
2. For me, the future often seems hopeless.

141. 1. People are both good and evil.
2. People are not both good and evil.

142. 1. My past is a stepping stone for the future.
2. My past is a handicap to my future.

143. 1. "Killing time" is a problem for me.
2. "Killing time" is not a problem for me.

144. 1. For me, past, present and future is in meaningful continuity.
2. For me, the present is an island unrelated to the past and future.

145. 1. My hope for the future depends on having friends.
2. My hope for the future does not depend on having friends.

146. 1. I can like people without having to approve of them.
2. I cannot like people unless I also approve of them.

147. 1. People are basically good.
2. People are not basically good.

148. 1. Honesty is always the best policy.
2. There are times when honesty is not the best policy.

149. 1. I can feel comfortable with less than a perfect performance.
2. I feel uncomfortable with anything less than a perfect performance.

150. .1 I can overcome any obstacles as long as I believe in myself.
2. I cannot overcome every obstacle even if I believe in myself.

* PLEASE RETURN THIS BOOKLET TO YOUR TUTOR OR TO THE PSYCHOLOGY DEPARTMENT *

* THANK YOU VERY MUCH FOR YOU COOPERATION *

APPENDIX J: THE NINETY SYMPTOM CHECKLIST (SCL-90)

INSTRUCTIONS:

This section presents a list of problems and complaints that people sometimes have. Please read each one carefully. After you have done so, circle one number that best describes how much that problem has bothered or distressed you DURING THE LAST TWO WEEKS.

* PLEASE BEGIN *

THE DEGREE TO WHICH YOU ARE BOTHERED BY:	NOT AT ALL	A LITTLE BIT	MODERATELY	QUITE A BIT	EXTREMELY
1. Headaches	0	1	2	3	4
2. Nervousness or shakiness inside	0	1	2	3	4
3. Unwanted thoughts, words, or ideas that won't leave your mind	0	1	2	3	4
4. Faintness or dizziness	0	1	2	3	4
5. Loss of sexual interest or pleasure	0	1	2	3	4
6. Feeling critical of others	0	1	2	3	4
7. The idea that someone else can control thoughts	0	1	2	3	4
8. Feeling others are to blame for most of your troubles	0	1	2	3	4
9. Trouble remembering things	0	1	2	3	4
10. Worried about sloppiness or carelessness	0	1	2	3	4

THE DEGREE TO WHICH YOU ARE BOTHERED BY:	NOT AT ALL	A LITTLE BIT	MODERATELY	QUITE A BIT	EXTREMELY
11. Feeling easily annoyed or irritated	0	1	2	3	4
12. Pains in heart or chest	0	1	2	3	4
13. Feeling afraid in open spaces or on the street	0	1	2	3	4
14. Feeling low in energy or slowed down	0	1	2	3	4
15. Thoughts of ending your life	0	1	2	3	4
16. Hearing voices that other people don't hear	0	1	2	3	4
17. Trembling	0	1	2	3	4
18. Feeling that most people cannot be trusted	0	1	2	3	4
19. Poor appetite	0	1	2	3	4
20. Crying easily	0	1	2	3	4
21. Feeling shy or uneasy with the opposite sex	0	1	2	3	4
22. Feeling of being trapped or caught	0	1	2	3	4
23. Suddenly scared for no reason	0	1	2	3	4
24. Temper outbursts that you could not control	0	1	2	3	4
25. Feeling afraid to go out of your house	0	1	2	3	4
26. Blaming yourself for things	0	1	2	3	4
27. Pains in lower back	0	1	2	3	4

THE DEGREE TO WHICH YOU ARE BOTHERED BY:	NOT AT ALL	A LITTLE BIT	MODERATELY	QUITE A BIT	EXTREMELY
28. Feeling blocked in getting things done	0	1	2	3	4
29. Feeling lonely	0	1	2	3	4
30. Feeling blue	0	1	2	3	4
31. Worrying too much about things	0	1	2	3	4
32. Feeling no interest in things	0	1	2	3	4
33. Feeling fearful	0	1	2	3	4
34. Your feelings being easily hurt	0	1	2	3	4
35. Other people being aware of your private thoughts	0	1	2	3	4
36. Feeling others do not understand you or are unsympathetic	0	1	2	3	4
37. Feeling that people are unfriendly or dislike you	0	1	2	3	4
38. Having to do things very slowly to insure correction	0	1	2	3	4
39. Heart pounding or racing	0	1	2	3	4
40. Nausea or upset stomach	0	1	2	3	4
41. Feeling inferior to others	0	1	2	3	4
42. Soreness of your muscles	0	1	2	3	4
43. Feeling that you are watched or talked about by others	0	1	2	3	4
44. Trouble falling asleep	0	1	2	3	4

THE DEGREE TO WHICH YOU ARE BOTHERED BY:	NOT AT ALL	A LITTLE BIT	MODERATELY	QUITE A BIT	EXTREMELY
45. Having to check and double-check what you do	0	1	2	3	4
46. Difficulty making decisions	0	1	2	3	4
47. Feeling afraid to travel in buses, cars or trains	0	1	2	3	4
48. Trouble getting your breath	0	1	2	3	4
49. Hot or cold spells	0	1	2	3	4
50. Having to avoid certain things, places, or activities because they frighten you	0	1	2	3	4
51. Your mind going blank	0	1	2	3	4
52. Numbness or tingling in parts of your body	0	1	2	3	4
53. A lump in your throat	0	1	2	3	4
54. Feeling hopeless about the future	0	1	2	3	4
55. Trouble concentrating	0	1	2	3	4
56. Feeling weak in parts of your body	0	1	2	3	4
57. Feeling tense or keyed up	0	1	2	3	4
58. Heavy feelings in your arms or legs	0	1	2	3	4
59. Thoughts of death or dying	0	1	2	3	4
60. Overeating	0	1	2	3	4
61. Feeling uneasy when people are watching or talking about you	0	1	2	3	4

THE DEGREE TO WHICH YOU ARE BOTHERED BY:	NOT AT ALL	A LITTLE BIT	MODERATELY	QUITE A BIT	EXTREMELY
62. Having thoughts that are not your own	0	1	2	3	4
63. Having urges to beat, injure, or harm someone	0	1	2	3	4
64. Awakening in the early morning	0	1	2	3	4
65. Having to repeat the same actions such as touching, counting, washing	0	1	2	3	4
66. Sleep that is restless or disturbed	0	1	2	3	4
67. Having urges to break or smash things	0	1	2	3	4
68. Having ideas or beliefs that others do not share	0	1	2	3	4
69. Feeling very self-conscious with others	0	1	2	3	4
70. Feeling uneasy in crowds, such as shopping or at a movie	0	1	2	3	4
71. Feeling everything is an effort	0	1	2	3	4
72. Spells of terror or panic	0	1	2	3	4
73. Feeling uncomfortable about eating or drinking in public	0	1	2	3	4
74. Getting into frequent arguments	0	1	2	3	4
75. Feeling nervous when you are left alone	0	1	2	3	4
76. Others not giving you proper credit for your accomplishments	0	1	2	3	4

THE DEGREE TO WHICH YOU ARE BOTHERED BY:	NOT AT ALL	A LITTLE BIT	MODERATELY	QUITE A BIT	EXTREMELY
77. Feeling lonely even when you are with people	0	1	2	3	4
78. Feeling so restless you couldn't sit still	0	1	2	3	4
79. Feelings of worthlessness	0	1	2	3	4
80. Feeling that familiar things are strange or unreal	0	1	2	3	4
81. Shouting or throwing things	0	1	2	3	4
82. Feeling afraid you will faint in public	0	1	2	3	4
83. Feeling that people will take advantage of you if you let them	0	1	2	3	4
84. Having thoughts about sex that bother you a lot	0	1	2	3	4
85. The idea that you should be punished	0	1	2	3	4
86. Feeling pushed to get things done	0	1	2	3	4
87. The idea that something serious is wrong with your body	0	1	2	3	4
88. Never feeling close to another person	0	1	2	3	4
89. Feelings of guilt	0	1	2	3	4
90. The idea that something is wrong with your mind	0	1	2	3	4

* PLEASE RETURN THIS BOOKLET TO YOUR TUTOR OR TO THE PSYCHOLOGY DEPARTMENT *

* THANK YOU VERY MUCH FOR YOUR COOPERATION *

APPENDIX K: COVER LETTER POSTED WITH THE INVENTORY BOOKLET DESIGNED FOR THE ONE-MONTH RETEST SAMPLE AND THE CLINICAL SUBJECTS

20 April 1984

AN ATTITUDINAL STUDY

This booklet contains an inventory which represents part of an attitudinal study currently being conducted by me in the Psychology Department at Rhodes University. By responding to it, you will be participating in an interesting research project.

The inventory is straightforward and should not take a long time to complete. Read the instructions carefully on the following page before beginning.

You will be able to fill in the booklet in your free time and return it the person who gave it to you as soon as possible. Remember that the way in which you respond to the inventory represents you and should not be based on help from others.

Participation in this research will not affect your future in anyway whatsoever. Moreover, as a psychologist I am ethically and legally bound to maintain strict confidentiality.

Your contribution to this research is greatly appreciated.

Sincerely yours

Mr. R. Bar-On

PLEASE FILL IN THE FOLLOWING INFORMATION ABOUT YOURSELF BEFORE READING THE INSTRUCTIONS ON THE NEXT PAGE

1. Age:_____years and_____months.

2. Sex: male/female.

3. Ethnic group: African/European/Asian/Coloured/other (specify:_____).

4. Citizenship:_____.

5. Language spoken at home:_____.

APPENDIX L: INSTRUCTIONS GIVEN TO FIRST YEAR TUTORS REGARDING THE DISTRIBUTION AND COLLECTION OF THE INVENTORY BOOKLETS

26 April 1984

re: Attitudinal inventories to be handed out to first year students .

Dear Tutor

You have been given a number of booklets which contain two attitudinal inventories. This represents part of my doctoral research currently being conducted in the Psychology Department.

Upon talking with the First Year Coordinator in your department, it was decided that I will be allowed to circulate these booklets to first year students via the tutors.

With your help, the booklets will be given to the students and later collected in the following manner:

1. They are to be given to the students in the next tut session.

2. The students should be told briefly that this is part of a research project being carried out by the Psychology Department and that their participation will greatly be appreciated.

3. They can complete the inventories in their free time and return them at the following tut session.

4. The completed booklets are to be collected in the following tut sessions by the tutors and handed over to the First Year Coordinator in you department. All unused booklets are to be returned.

5. Students who forget to bring them in on the following tut session are to be reminded to return them the week thereafter, or see to it that they get to me in the Psychology Department as soon as possible.

6. Those who have been asked to participate in this research in the last two weeks in another tutorial on campus should not fill in the booklets a second time in the present tutorial.

Thank you very much for your cooperation.

Sincerely yours

R. Bar-On

APPENDIX M: STATISTICAL PROPERTIES OF THE 130 ITEMS ADMINISTERED DURING THE EXPERIMENTAL PHASE OF THE STUDY (N=300)

Item	Mean	S.D.	Mode	Median	Kurtosis	Skew
1.	5.01	1.16	6.00	5.10	.384	-.575
2.	5.30	0.96	6.00	5.44	-.032	-.472
3.	5.34	1.22	6.00	5.49	.061	-.541
4.	5.19	1.22	6.00	5.27	-.508	-.324
5.	5.45	1.26	6.00	5.57	-.120	-.554
6.	5.08	1.33	6.00	5.34	-.545	-.506
7.	4.81	1.04	5.00	4.80	-.317	-.086
8.	3.09	1.33	4.00	3.10	-.115	.309
9.	4.72	1.14	5.00	4.74	.414	-.322
10.	4.64	1.31	5.00	4.68	-.256	-.199
11.	5.50	1.01	6.00	5.62	3.100.	-1.130
12.	5.45	1.45	7.00	5.69	-.409	-.633
13	6.01	1.05	7.00	6.19	1.220	-1.160
14.	5.44	1.24	6.00	5.56	.284	-.672
15.	5.03	1.72	7.00	5.32	-.844	-.470
16.	4.98	1.48	6.00	5.20	.010	-.708
17.	4.69	1.17	4.00	4.66	-.210	-.260
18.	3.91	1.55	4.00	3.90	-.653	.113
19.	4.51	1.24	4.00	4.49	-.075	-.267
20.	5.28	1.08	5.00	5.36	1.140	-.745
21.	3.60	1.52	4.00	3.68	-.650	-.021
22.	5.38	1.63	7.00	5.75	-.367	-.763
23.	4.84	1.40	5.00	4.94	-.300	-.393
24.	5.65	1.45	7.00	6.03	.404	-1.020
25.	5.76	1.52	7.00	6.31	.294	-1.110

Item	Mean	S.D.	Mode	Median	Kurtosis	Skew
26.	4.81	1.39	6.00	5.05	.365	-.853
27.	4.97	1.31	4.00	4.94	-.473	-.170
28.	5.76	1.14	6.00	5.93	1.070	-.977
29.	3.87	1.85	2.00	3.80	-1.130	.155
30.	4.60	1.34	6.00	4.70	-.599	-.399
31.	4.85	1.10	5.00	4.96	.238	-.572
32.	4.75	1.60	6.00	4.87	-.550	-.441
33.	4.36	1.43	5.00	4.43	-.723	-.169
34.	4.03	1.18	4.00	4.00	-.039	.009
35.	5.33	1.53	6.00	5.71	-.248	-.757
36.	4.87	1.56	6.00	5.03	-.051	-.660
37.	4.90	1.32	4.00	4.88	-.658	-.184
38.	6.37	1.22	7.00	6.78	5.340	-2.330
39.	5.55	1.25	6.00	5.82	1.290	-1.070
40.	5.07	1.30	5.00	5.14	-.229	-.426
41.	5.17	1.29	6.00	5.34	-.399	-.444
42.	5.31	1.15	6.00	5.50	.875	-.840
43.	5.47	1.43	6.00	5.82	.304	-.976
44.	5.10	1.44	6.00	5.46	-.225	-.654
45.	5.46	1.33	6.00	5.67	.228	-.709
46.	4.56	1.21	4.00	4.54	-.078	-.200
47.	2.67	1.32	2.00	2.49	.260	.758
48.	4.37	1.40	4.00	4.44	.002	-.467
49.	5.09	1.65	6.00	5.52	-.411	-.699
50.	4.67	1.35	4.00	4.68	-.196	-.324
51.	6.05	1.27	7.00	6.56	1.340	-1.360
52.	5.49	1.07	6.00	5.64	1.440	-.928

Item	Mean	S.D.	Mode	Median	Kurtosis	Skew
53.	5.95	0.98	6.00	6.08	-.128	-.742
54.	5.42	1.18	6.00	5.55	-.316	-.463
55.	5.45	1.30	6.00	5.73	1.030	-1.020
56.	5.54	1.51	7.00	5.93	.410	-1.040
57.	4.61	1.64	6.00	4.72	-.922	-.273
58.	4.85	1.96	7.00	5.16	-.812	-.569
59.	4.97	1.35	6.00	5.19	-.108	-.677
60.	3.74	1.18	4.00	3.79	.002	.100
61.	4.49	1.44	4.00	4.49	-.505	-.285
62.	4.21	1.80	4.00	4.24	-.976	-.201
63.	5.36	1.37	6.00	5.61	.264	-.814
64.	5.91	1.62	7.00	6.59	2.010	-1.640
65.	5.17	1.42	6.00	5.57	-.147	-.657
66.	5.57	1.17	5.00	5.65	.026	-.547
67.	5.49	1.11	6.00	5.62	.361	-.620
68.	5.30	1.20	5.00	5.39	1.260	-.879
69.	3.16	1.30	3.00	3.11	-.445	.256
70.	4.61	1.52	4.00	4.62	-.479	-.285
71.	5.52	1.43	6.00	5.84	.791	-1.080
72.	4.55	1.34	4.00	4.63	-.066	-.517
73.	3.00	1.32	2.00	2.81	.174	.727
74.	4.43	1.45	4.00	4.47	-.171	-.447
75.	3.65	1.99	1.00	3.59	-1.280	.139
76.	4.80	1.40	5.00	4.84	-.549	-.243
77.	6.49	0.91	7.00	6.78	2.340	-1.820
78.	5.16	1.40	6.00	5.48	-.088	-.697
79.	5.28	1.18	6.00	5.39	-.560	-.356

Item	Mean	S.D.	Mode	Median	Kurtosis	Skew
80.	5.58	1.18	6.00	5.74	.825	-.828
81.	4.57	1.56	5.00	4.69	-.552	-.370
82.	4.91	1.13	5.00	4.96	.403	-.459
83.	4.39	1.34	4.00	4.34	-.332	-.107
84.	4.56	1.44	4.00	4.61	-.211	-.447
85.	5.28	1.05	6.00	5.34	-.345	-.302
86.	2.89	1.13	3.00	2.85	.082	.405
87.	5.07	1.35	6.00	5.23	.739	-.793
88.	4.65	1.65	4.00	4.77	-.470	-.469
89.	5.13	1.22	5.00	5.17	-.290	-.313
90.	6.87	0.55	7.00	6.96	26.859	-5.021
91.	5.21	1.29	6.00	5.59	.559	-.864
92.	5.38	1.06	6.00	5.52	.354	-.622
93.	4.98	1.30	4.00	5.01	-.536	-.260
94.	5.91	1.36	7.00	6.32	1.683	-1.435
95.	4.75	1.30	6.00	4.75	-.637	-.186
96.	5.24	1.45	6.00	5.54	.210	-.826
97.	5.13	1.61	7.00	5.34	.163	-.810
98.	5.27	1.36	6.00	5.56	-.057	-.717
99.	3.97	1.44	4.00	3.94	-.444	.047
100.	5.13	1.04	5.00	5.12	-.178	-.124
101.	3.24	1.59	3.00	3.11	-.158	.588
102.	4.87	1.09	4.00	4.83	.235	-.132
103.	6.62	0.89	7.00	6.86	10.971	-3.071
104.	5.66	1.31	6.00	5.93	2.103	-1.348
105.	5.56	1.11	6.00	5.69	.347	-.660
106.	5.63	1.14	6.00	5.74	.163	-.609

Item	Mean	S.D.	Mode	Median	Kurtosis	Skew
107.	5.77	1.09	6.00	5.90	1.066	-.900
108.	4.80	1.21	4.00	4.81	-.226	-.290
109.	4.52	1.37	5.00	4.63	-.288	-.419
110.	4.54	1.65	4.00	4.48	-.545	-.438
111.	4.93	0.97	5.00	4.93	-.325	.002
112.	4.34	1.57	4.00	4.27	-.888	-.109
113.	5.03	1.18	5.00	5.09	.020	-.407
114.	4.69	1.68	6.00	4.90	-.865	-.395
115.	4.80	1.11	5.00	4.86	-.029	-.388
116.	6.18	1.20	7.00	6.60	2.244	-1.663
117.	6.07	0.94	6.00	6.16	4.519	-1.548
118.	5.57	1.11	6.00	5.72	1.470	-.926
119.	5.49	1.05	6.00	5.62	-.645	-.327
120.	3.36	1.37	4.00	3.35	-.538	.217
121.	5.03	1.26	6.00	5.16	-.005	-.548
122.	4.81	1.16	5.00	4.90	.551	-.656
123.	5.36	1.42	6.00	5.72	.376	-.947
124.	4.47	1.19	4.00	4.44	.361	-.329
125.	3.24	1.40	2.00	3.15	-.228	.444
126.	4.78	1.47	6.00	4.95	-.496	-.466
127.	4.89	1.59	5.00	5.08	-.008	-.704
128.	4.43	1.35	4.00	4.33	-.077	-.188
129.	5.95	1.36	7.00	6.37	2.674	-1.637
130.	5.66	1.19	6.00	5.88	2.172	-1.257

APPENDIX N: t-VALUES FOR LEVELS OF SIGNIFICANT DIFFERENCE FOR SEX/AGE DIFFERENCES AND INTERACTIONS ON THE INVENTORY SCALES

Scale	Sex diff.	Age diff.	YM/OM	YF/OF	YM/YF	OM/OF	YM/OF	YF/OM
Self Regard -------	3.16	1.02	-.71	1.68	3.16	1.36	2.97	-1.54
Interpersonal Rel.	-3.78	-.06	2.67	-2.56	-3.78	-3.06	-3.01	2.87
Soc. Responsibility	-3.56	-1.41	1.57	-2.86	-3.56	-2.52	-3.55	1.55
Independence ------	2.34	-1.12	-2.44	1.18	2.34	2.17	.78	-2.72
Flexibility -------	-.43	-1.90	-1.05	-.90	-.43	.19	-1.61	-1.08
Problem-solving ---	.80	-.40	-1.10	.64	.80	1.03	.25	-.95
Assertiveness -----	2.54	-.35	-1.79	1.33	2.54	1.84	1.37	-2.30
Reality Testing ---	.88	-2.81	-2.30	-.61	.88	1.14	-1.21	-2.93
Stress Tolerance --	4.23	.08	-2.89	2.78	4.23	3.31	2.79	-3.21
Self-actualization	-.19	1.66	1.08	.62	-.19	-.36	1.09	1.44
Happiness ---------	-1.26	1.29	1.35	.01	-1.26	-.86	.02	1.58
Psychological Health	.62	-.86	-1.02	.11	.62	.71	-.16	-1.09

YM=young males; OM=older males; YF=young females; OF=older females .

APPENDIX O: MEAN SCALE SCORES AND STANDARD DEVIATIONS FOR THE CONCOMITANTLY ADMINISTERED TESTS (16PF, POI, SCL-90)

16PF			POI			SCL-90		
SCALE	MEAN	S.D.	SCALE	MEAN	S.D.	SCALE	MEAN	S.D.
A	10.9	3.5	Tc	16.6	2.8	SOM	.562	.497
B	8.5	2.0	I	81.4	10.1	O-C	1.203	.734
C	14.9	3.9	SAV	20.3	3.0	INT	1.098	.732
E	13.5	3.5	Ex	19.7	4.4	DEP	.952	.714
F	16.3	4.7	Fr	15.3	2.8	ANX	.747	.604
G	11.4	3.2	S	12.6	2.1	HOS	.631	.744
H	11.5	5.2	Sr	12.5	2.1	PHOB	.366	.616
I	11.1	3.5	Sa	14.5	3.4	PAR	.914	.794
L	9.7	3.0	Nc	10.9	2.2	PSY	.673	.706
M	13.2	3.0	Sy	6.6	1.6	GSI	.797	.573
N	11.1	2.6	A	15.4	3.5			
O	11.3	3.8	C	16.7	3.8			
Q1	9.3	2.5						
Q2	11.4	3.4						
Q3	10.3	3.0						
Q4	13.5	4.5						

APPENDIX P: INVITATION POSTED TO PROSPECTIVE INTERVIEWEES AND ONE-MONTH RETEST SUBJECTS

14 May 1984

Dear_____

First of all, thank you very much for completing the attitudinal inventory which you received some two weeks ago.

In the booklet which was handed back, you indicated that you would agree to be interviewed and asked a few questions related to the study being conducted.

Upon noting the times available to you, I would like to invite you for an interview on_____at_____in the _____. My office is in Room 114 on the second floor of the Psychology Department (adjacent to the Library). The interview will last approximately half an hour. In light of the fact that other students are to be interviewed before and after you, it is important that we begin on time.

Enclosed is a booklet containing one of the inventories that you have completed not long ago. After completing it, please post it back to me in the enclosed envelope or bring it to me at the time of your interview.

I will be contacting you in the next few days to verify receipt of this letter.

Once again, I would like to express my appreciation for your cooperation in this research.

Sincerely yours

Reuven Bar-On

APPENDIX Q: FORM FOR RECORDING OTHER-OBSERVER RATINGS OF INTERVIEWEES

CASE NO.:_____ DATE:_____

1. Looking at my good points and bad points, I feel good about myself.
   (-1-2-3-4-5-6-7-)SR

2. I'm able to give and receive warmth and affection.
   (-1-2-3-4-5-6-7-)IPR

3. I'm more of a follower than a leader.
   (-1-2-3-4-5-6-7-)I

4. I've been told that I don't have a strong sense of responsibility.
   (-1-2-3-4-5-6-7-)R

5. I feel helpless when I have to stand up for my rights and express my feelings.
   (-1-2-3-4-5-6-7-)A

6. When trying to solve a problem, I look at both the pros and cons of each possible solution and then decide on the best course of action.
   (-1-2-3-4-5-6-7-)PS

7. I think that there's only one real way of looking at most things in life.
   (-1-2-3-4-5-6-7-)F

8. I try to see things as they really are, without fantasizing or daydreaming about them.
   (-1-2-3-4-5-6-7-)RT

9. I tend to take difficult situations too seriously and become overwhelmed.
   (-1-2-3-4-5-6-7-)ST

10. I try to develop and expand those activities which I enjoy.
    (-1-2-3-4-5-6-7-)SA

11. It's hard for me to enjoy life.
    (-1-2-3-4-5-6-7-)H

(Below average PH/Average PH/Above average PH)

PH = (-1-2-3-4-5-6-7-)

(1. To 11.)/11 = _____

COMMENTS:_____

APPENDIX R: FORM FOR RECORDING SELF-ASSESSMENTS OF THE ELEVEN PERSONALITY FACTORS AND PSYCHOLOGICAL HEALTH OF THE INTERVIEWEES

NAME:_____CASE NO.:_____

1. POOR SELF REGARD -1-2-3-4-5-6-7- GOOD SELF REGARD

2. POOR INTERPERSONAL RELATIONSHIPS -1-2-3-4-5-6-7- GOOD INTERPERSONAL RELATIONSHIPS

3. DEPENDENT -1-2-3-4-5-6-7- INDEPENDENT

4. IRRESPONSIBLE -1-2-3-4-5-6-7- RESPONSIBLE

5. NON-ASSERTIVE -1-2-3-4-5-6-7- ASSERTIVE

6. POOR PROBLEM-SOLVING -1-2-3-4-5-6-7- GOOD PROBLEM-SOLVING

7. RIGID -1-2-3-4-5-6-7- FLEXIBLE

8. POOR REALITY TESTING -1-2-3-4-5-6-7- GOOD REALITY TESTING

9. POOR STRESS TOLERANCE -1-2-3-4-5-6-7- GOOD STRESS TOLERANCE

10. NON-SELF-ACTUALIZING -1-2-3-4-5-6-7- SELF-ACTUALIZING

11. UNHAPPY -1-2-3-4-5-6-7- HAPPY

Have you ever felt a need for receiving psychological or psychiatric help?
-NEVER-VERY SELDOM-SELDOM-SOMETIMES-OFTEN-VERY OFTEN-ALWAYS-

EMOTIONAL PROBLEMS -1-2-3-4-5-6-7- POSITIVE MENTAL HEALTH

(1. TO 11.)/11=_____

COMMENTS:_____

APPENDIX S: THREE TRANSCRIBED INTERVIEWS EXEMPLIFYING (1) AVERAGE, (2) ABOVE AVERAGE AND (3) BELOW AVERAGE PSYCHOLOGICAL WELL-BEING (ER=INTERVIEWER//EE=INTERVIEWEE)

Case No. 21--A female interviewee who is thought to exemplify one who possesses average psychological well-being

ER: The first item is "Looking at my good points and bad points, I feel good about myself." This is trying to tap a sort of panoramic view looking at both past and present, good and bad, looking at yourself. And looking at what you see, do you generally feel good about what you see of yourself as a person or not so?

EE: Well...I think I do. Last year I went through quite a very emotional period which was not very pleasant to experience at all; it was... and...In fact, I nearly cracked up, and it was related to parents and boy friend not accepting one another. Well not really a breakdown, but it felt very bad, very bad inside...And especially doing social work, in that they do teach you to be very much self aware...and...it's horribly difficult because it digs up all of your feelings; you really get to know yourself. And that's why I think I have come to accept myself the way I am for the most part and work on things I can improve. That's why I generally sort of feel, I would honestly say as I'm thinking about it, good about myself; I try to accept myself. Because if I cannot accept myself, I can't accept other people and their problems. So, if that makes sense...

ER: So, would you say that in most situations today, looking at yourself, you feel good about yourself or not so? Or, something else? I realize that this is a very vague sort of a question to put to one. But how do you see yourself and accept yourself with all of what you have said.

EE: I think, yeh, sometimes, but not always. I don't think anybody can say that. I mean I don't think one can say that they always feel good about themselves all the time. I would say that for the most part I feel good about myself. I feel that I go through periods. Most people are probably like that I guess. Does that make sense?.

ER: So, at times, you feel good about yourself and accept yourself and at times not so. It sounds like you feel better about yourself today than you did a year ago. Is that right?

EE: Yes. I would say that's right. It is definitely better than last year. And, I can see it getting better. I think I know myself better than I did, and that makes it easier for me.

ER: This item is "I'm able to give and receive warmth and affection."

EE: Yes, I remember that question; and I remember how I responded to it.

ER: This item is attempting to tap the way you are with others. This is in interpersonal and social relationships. The ability to give to others and to receive from others. How do you feel about that?

EE: I feel, well, sure with some people and better than with others. But I feel quite a great deal...I think I am a warm person. And many times, my friends in res (campus residential housing) will just open up to me. Another thing about me is that I am open, I don't hide things. And it is also, I think, a way of showing warmth; and, therefore, it's a give and take.

ER: Do you, in looking at your interpersonal relationships, or would you say that you feel fairly good with them or not so satisfied? The people you come in contact with, in your groups.

EE: ...It differs...Some people I'm not satisfied with. Because I have really found that doing social work, I can no longer just talk on a superficial level. I really enjoy somebody that I can sit and talk about something with. Especially like relationships. That's very important to me. So, with some of my relationships, I'm not satisfied with. No. With some people, they don't personally think as I do, feel as I do. You know.

ER: "I'm more of a follower than a leader."

EE: At times...Well, I've found that the older I get, I'm becoming more of a leader. But, I still don't see myself as a definite leader as such. Not yet. Well, it's an entirely different situation. If I got to lead, then I can do it. But I won't, I don't always, sort of push myself forwards to participate. I have done it.

ER: Do you think..., but again this depends on the situation...But, in most situations that you find yourself, do you find that you rely more on yourself or more on others in thinking things out and in doing things? Or would you rely more on yourself or mainly on others?

EE: I think I...I do rely on myself, but I do take other peoples' opinions, definitely. I don't think that what I feel or know is always right. I do try to take others into consideration.

ER: So, you could consult with them or take advice, but you would make the decision in the end?

EE: Oh...well, I think the older one gets also, people leave it up to you. You've got to make the decision. Should I do something? But I do hope...I do look for advice, I do go for consultations many times.

ER: If you were carrying something out, some sort of project, would you ask people to come and help you? Or would you generally try to do it yourself?

EE: No. I would ask. I think if I need help, I would ask. I would definitely ask. Yes.

ER: As far as emotional things...do you feel that you are sort of dependent on others emotionally? Or are they dependent on you?

EE: Oh...well...let's say like last year, when I was in a bad state, I needed other people very very much. But I feel that as I get sort of stronger emotionally...because it really did hit me, oh...I can...somehow

cope on my own. But I still need other people to talk to. But not to the extent to which I used to. See, this is the thing about me, I talk to people, I don't sit and bottle it up. It comes out.

ER: This item is "I've been told that I don't have a strong sense of responsibility." This means social responsibility to your social group or groups. The way your behaviour is socially...responsible to others or not so. The degree of cooperation, of working with others, or the opposite, the lack of it. Do you feel that you are socially responsible, responsible or irresponsible to your fellow man, towards your group?

EE: Socially responsible. Ah, I think so. Yes.

ER: Do you think that sometimes, you do things that are socially irresponsible?

EE: No, no. No, I can't say that of myself. I stick very much to the line as such.

ER: This one is "I feel helpless when I have to stand up for my rights and express my feelings."

EE: ...Ah...another thing...like...I'm learning to be, to be more assertive. I am learning that; but I can be more assertive with some people, but with my parents, I can't be...no. But with other people, I can really say how I feel because they don't pounce on you for whatever you say, so you can say it. Yet, you have to say it.

ER: So, you could say, if you felt your rights were being violated, if someone was bothering you, you could convey that to the other person?

EE: ...Ah...It depends on the person, it depends on whatever happened.

ER: If it wasn't your parents, if it was someone else.

EE: If it was somebody else. I think fairly quickly, I might not be able to say something straight away. But, I try to speak up straight away. I don't let it boil over.

ER: Would you be able to convey likes and dislikes to people? Say, this I like, this I do not like. Or ideas--I feel this about that.

EE: Yes, yes. It get's better all the time, I would say.

ER: "When trying to solve a problem, I look at both the pros and cons of each possible solution and then decide on the best course of action." This means the every day type of problems; they could be more complex, but things that we deal with daily. Is this the way you deal with daily problems or do you deal with them differently?

EE: I don't know. I think sometimes...well, any person will jump into something without thinking about it. Ah...I can't say that I always think of the pros and cons...If I have time to think of it, then I do. I do think about it.

ER: Do you think you're pretty good about solving the everyday types of problems that come up or have difficulty in it?

EE: I think fairly good. At times...it depends so much on how the person feels. At a particular time if you can cope with...Because sometimes I look and think and just...

ER: So, if you feel good, you can cope better?

EE: Yes, and if I really feel hopeless, then I don't, I just...You know, sort of lacking in self esteem or what all.

ER: This one is "I think that there's only one real way of looking at most things in life." Looking at things, thinking about things, dealing with things, doing things...

EE: Only one way? No. I don't think so. I don't think I look at only one way to deal with things. No.

ER: If...you were having a discussion with someone, and you were putting your point of view forward. And the other person was putting his or her point of view. And in the middle of this thing, you would say "wait a minute" to yourself, "my thing is not right, the other person is right." Could you then change gears and say "you're right, I'm wrong"?

EE: I think so. Yes, yes. I think I can recognize things like that. No, I'm not dogmatic about it or absolutely stick to one thing.

ER: If new things come up in your life, is it hard for you or easy for you to change and adapt?

EE: No. I think I'm fairly adaptable to quite a degree.

ER: "I try to see things as they really are, without fantasizing or daydreaming about them." Everyone day dreams and fantasizes. Some people rely more heavily on it than checking things out around them, to see what's going on. And some people rely less on daydreaming and more on information gathering as it were. How do you think you generally are? More of a dreamer and less of an information collector or the opposite?

EE: No (with a slight laugh). I don't think I'm a daydreamer. As a matter of interest, I don't know if this means anything, but many of my friends have said to me that my problem is that I live too close to reality.

ER: With two feet really on the ground?

EE: Obviously yes. Yeh. That's what they have said to me. I think that it is true, very true.

ER: "I tend to take difficult situations too seriously and become overwhelmed." These are not the every day problems, but the very serious things that happen in life. How do you think you react to these things when they come about?

EE: Well...I think I can become overwhelmed, depending upon how I feel...definitely I do become overwhelmed.

ER: Do you become panicked, sometimes? Or, not knowing what to do?

EE: ...If it is somebody else's life, then I can cope. But sometimes if it happens in my own life, I do panic. I do.

ER: Would it be...Say that you are at varsity, and something in your own life happens, very serious. Would you be able to attend lectures, and function as a student, studying for examinations and so forth? Or, would you have problems?

EE: Oh (loudly)...I think about last year when my father had a heart attack, amongst other things. Now, I wasn't functioning normally or fully. But I did still carry on.

ER: After something big, would it be easy or hard for you to go back to your normal routine?

EE: Ah...I wouldn't say easy, but I wouldn't say hard. But I would have to push myself. I think, to get back into things as such. Because I find it when one's equilibrium is thrown off, it's hard to get back into something.

ER: "I try to develop and expand those activities which I enjoy." Things, your interests, your hobbies, things that you feel good at and things that you enjoy doing. Do you tend to do more of it, and get more out of it, or just don't have time although you know that you enjoy it but just don't get to it?

EE: No. I do try to make time for, for...I enjoy doing tapestries, that type of thing. So, I would say that I do try to make time. Not always, but I know that I enjoy it. So, I don't just leave it. That's another thing that I have come to learn, that one must, you must give yourself leisure time. You must do something, even if you are very busy. Right now, I'm not working on tapestries; I'm knitting at the moment (with a slight laugh).

ER: Do you feel that if you take the last year or two years, do you feel that you are getting more out of doing tapestries?

EE: I think so.

ER: And this last one is "It's hard for me to enjoy life." Again, this is a panoramic type of view. Do you feel that you enjoy life in general, or are you discouraged about life, or do you enjoy yourself or is it hard to enjoy yourself.

EE: ...Ah...I would say that I do enjoy life...I can't say that I don't. Sometimes I think that one does get discouraged, definitely. But I think, on the whole, I definitely do enjoy it. I'm happy as such.

ER: So, you can do things you like doing and just sit back and have fun.

EE: Yes. I think so. Yes.

Case No. 29--A male interviewee who was thought to exemplify one who possesses above average psychological well-being:

ER: This is the first item. "Looking at my good points and bad points, I feel good about myself." This is an overall view of yourself, past and present as you see yourself, and asking in essence how well you feel about yourself.

EE: O.K. Starting at school, I was quite O.K. considering sports, because academically it was not too outstanding. Afterwards, I went to the military. And, I achieved quite well. I received rank and quite a responsible position, in the military. I felt quite well with the work I did. I really enjoyed it as well in that sense. And I have been reasonably confident to sort of carry out that type of job. I have generally been quite confident sense.

ER: In general and with all of that together, do you think you feel good about yourself, or not so...most of the time and in most situations.

EE: Most of the time, I feel good, because, well...I feel I keep myself physically active, and I feel very satisfied.

ER: This next item is "I'm able to give and receive warmth and affection." This is trying to get at interpersonal relations and social relationships. Your ability to give to others and receive from others. Just looking at the quality of you interpersonal relationships. Just looking at the way you generally feel about these relationships. In general. There are all sorts of interpersonal relations: with your parents, with friends here, in the army, in varsity, and so forth.

EE: Well, generally, I feel quite strong about it because I reckon that relations between people are really important. And I think that a lot of people tend to enjoy being with one another and discussing things and...I really seem to get on well with them. I don't have problems with them. I sort of pick up on the friendly side.

ER: Do you feel good with others?

EE: Yes. I feel very good. I feel quite good with them.

ER: So, its not that difficult to give to others and receive from them?

EE: Not really. I'm pretty open that way. I just approach people straight onwards.

ER: This one is "I'm more of a follower than a leader."

EE: ...Well, I don't know; it depends on the situation (with a slight laugh). It depends what happens. If someone has more knowledge than I do in a certain field, I would be prepared to follow. But, if I've, if I reckon that I might have the quality, through training or whatever, I'll be a leader.

ER: Well, kind of related to this would be that some people tend to rely more on themselves to think things out and do things, and some people tend to rely more on others than on themselves. How are you in most situations?

EE: In most situations, I had to think things out on myself. I have been really independent throughout. I have really never needed to rely on anyone in that sense.

ER: If you were carrying something out, doing something, would you ask other people to come in and help you? Or, would you generally be able to do it yourself?

EE: If I would be able to do it myself, I would do it. But if I reckoned that I needed some advice here and there, I would call on others for advice.

ER: This item is "I've been told that I don't have a strong sense of responsibility." And responsibility is social responsibility toward your fellow man, toward your social group. This is responsible or irresponsible behaviour towards others in your group. Cooperating with, or the opposite not cooperating with others. The way you fit in and fit in and are responsible or irresponsible with others.

EE: Well, I feel I must be quite responsible as to get on with them. You know, to get on with others, you have to be responsible, honest and open with them.

ER: Do you think that your behaviour is responsible when relating to others? Or do you think that you are irresponsible or do things that go against the group?

EE: Generally, I've been really responsible. For the most part, I'm responsible.

ER: "I feel helpless when I have to stand up for my rights and express my feelings."

EE: Never really. I'm quite comfortable with this. I'm quite confident. I always put my point of view across and stand up for it.

ER: "When trying to solve a problem I look at both the pros and cons of each possible solution and then decide on the best course of action." These are the everyday types of problems that we try to find solutions to. Not the very serious problems. They can be more complex, but the types of things that we see every day. Is this the way you deal with problems, or do you deal with them differently?

EE: Well, that's really the only way to solve problems successfully; to deal with the pros and cons. To deal with them. I look at the various sides and decide on the best way.

ER: Do you think that you are pretty good at it? Generally speaking?

EE: Well, that depends. But I try to think them out and get the

solution.

ER: "I think that there's only one real way at looking at most things in life." Looking at, doing things and whatever.

EE: No. I think there are alternatives. I try to keep myself and my mind open, and see what others have to say.

ER: If you were in an argument with someone, a discussion, and you were carrying your point of view and the other person had his or her point of view. And in the middle of the discussion, you thought that the other person was right and you were wrong. Could you stop and shift in the middle and say "you've got a point, you're right"?

EE: I do that quite easily. I'm quite open to that.

ER: "I try to see things as they really are, without fantasizing or daydreaming about them." Some people rely more on daydreaming and fantasy to think things out or understand things around them, rather than collect information. And some people try to collect bits and pieces of information, and see what's going on around them. How do you think you are?

EE: Well, I try to see the relative situation the whole time. But, I am tempted to daydream now and then, but I try to keep it out of my decision-making and all of that. I try to see things as they actually are.

ER: Can you pull out of your daydreams, or find it difficult?

EE: Yes. I pull out of it.

ER: Do you tend to check things out to see how it is out there?

EE: Yes.

ER: "I tend to take difficult situations too seriously and become overwhelmed." These are the extreme, serious situations that come up from time to time in life. And some people get anxious and nervous, some people can cope and manage the situation even though being under pressure. And some people just fall apart. How do you think you react?

EE: Well, I've been in some really tense situations. And I find that sometimes...especially when you see people around you falling apart and not being able to cope any more, then I really feel my best in a sense. I've been in some tough situations.

ER: So, you feel that you can cope in such difficult situations?

EE: Yes. I have coped. It really isn't a problem for me.

ER: What if it was a very personal problem in your life, something that was very serious? Would that also be easy or more difficult?

EE: I would try to communicate with someone else and try to sort it out. I think in the end, I could manage and make it through. I wouldn't keep

it inside of me.

ER: This one is "I try to develop and expand those activities which I enjoy." Some people know what they like, what they're good at or enjoy doing, and devote a lot of time and expand their knowledge and sort of grow with what they're interested in. Other people know what they like, but don't have the time or just neglect it. How do you think you are with your interests or hobbies?

EE: Well, I've been doing my interests the whole time, expanding on them. I've been carrying out my interest. I try to keep up my interests and carry on with it. I feel I must keep up my interests, and I like it.

ER: What are your interests? What do you like?

EE: Well, at the moment, at university with my subjects. And I really am interested in psychology.

ER: Do you find that you're reading more about it, or want to?

EE: I've been really reading quite a bit and enjoy it. The more I read, the more I want to know about it.

ER: This last one is "It's hard for me to enjoy life." This again is a type of panoramic type of thing, looking at everything that you're involved in, a sum total type of thing. Do you enjoy it, or don't enjoy it, enjoy yourself, in general or not?

EE: I must say that I am enjoying it extremely so. I try to get the most out of things. If I have problems, I can pull myself out of it.

Case No. 24--A male interviewee who was thought to exemplify one who possesses below average psychological well-being:

ER: One of the questions that appeared in the inventory was "Looking at my good points and bad points, I feel good about myself." Could you expand upon that and say how that could probably apply to you? The way you feel about yourself in general, looking at all different aspects of yourself. How you feel about you.

EE: Well...I think I suffer from quite an inferiority complex. This is a difficult aspect, you know, comparing myself to the other chaps. I don't really see myself as really being very much. And when it comes to girls and stuff like that, I've got a very strong inferiority complex. I think that's what I put down on my inventory. Oh...I'm trying to sort it out now by expanding in sports and stuff. But as far as work is concerned, I'm quite happy there; I know I can do it...if I want to...no problem there.

ER: So, when it comes to like work, it's O.K.; but when it comes to girls and social relationships, what you think about yourself is not O.K.. If you would take the whole thing together, work, girls, other areas of your life, how do you think you would sum up how you feel about yourself?

EE: ...Not very well, not very well actually...Ah...I found that my views about things just change all the time, my attitudes...Ah...sometimes I'm quite happy about life. Other times, it just goes...not very well actually.

ER: Another item that appeared in the inventory was "I'm able to give and receive warmth and affection." How would you expand upon this give and take sort of thing in interpersonal relations between you and other people? How do you feel in general?

EE: Sort of warm affections and that sort of thing? Ah...I'm very concerned about other people. You know it worries me if someone else is not doing O.K. But...I can get on with people, but...as I said with girls, I find it very hard to get a personal relationship going. You know, a one to one sort of thing. But, as a group, I can. You know, one thing I like doing is helping people. You know, like if they have a problem or something like that. I kind of enjoy sort of helping them out.

ER: Do you think it's easier for you to give to others rather than to receive?

EE: Oh, yeh. Very much so. Actually when it comes to myself, if I got a problem, I like to look after it myself. Like the end of last term, I did B.Com (a course leading to a bachelors degree in commerce) last year, and I wasn't doing well. So, I got very frustrated. I dropped out of varsity totally. Then, I had to reapply to come back again. When it comes to that, I prefer to do it myself which is related to another part of the inventory when you said "Do you think that decisions should be made for you or by you?" To a certain extent, I said that I prefer they should be made for me.

ER: That's interesting because that's the next item or one similar to that. This item is "I'm more of a follower than a leader." This is the way in which you work on your own or work with others or depend on yourself or depend on others. How do you think that applies to you?

EE: Well, ah...when it comes to sort of politics and things, I tend to follow. You know, I don't worry about forming my own plan. I just sort of sit and listen to what other people sort of say and do it. I haven't got strong views on anything really. But on other things like work, I can form my own views and stick to that. If I got my own views, I don't push them on other people. Because I found, like the other question in the inventory which said "If you got two friends..."...If a friend of mine would say something different from what I thought, I would tend to agree with him even if I felt different. And these days I really don't push it, I sort of keep it quiet, to myself.

ER: So, if you are working on your own, you'll generally try to depend on yourself. But in other areas, if someone says something, you generally go along with it.

EE: Well, it depends. If the person is a bit younger, I'll push; but if someone is older than me, I'll...it's a conflict. It's just with older people.

ER: Another item that appeared which is similar was "Do you like others to make decisions for you?" How do you feel about that?

EE: Well...to a certain extent. I mean if I decided something... Not as far as that. You know, certain decisions. You know, parents make certain decisions for you anyway, about school and university and that sort of thing. Well, I find that I make mistakes. I chose B.Com. That was my own decision, and it was a mistake. I find a lot of the time if I got two choices and its really important for me to decide, I keep shopping for suggestions.

ER: The next item is related to what you began to discuss in the beginning. It is "I've been told that I don't have a strong sense of responsibility." I would like for you to expand upon this. This relates to social responsibility, the way in which you feel that things should be or should not be, or the way in which you do things for other people or don't do. Your share of responsibility in relations.

EE: Well, I think it depends where you take responsibility from. Because as a leader, you lead everyone. But I'm not a leader at all. It's just one of those things I suppose. But if you are in a group...if I took responsibility for something, then I would do it. But I really couldn't lead people and ask them to do this or that. It wouldn't work. I've tried it before.

ER: Do you think your behaviour shows a sense of responsibility towards others or the group like doing things that are constructive and contributing to the group? Or the other way around?

EE: Yeh. I think so. Contributing to, but nothing as far as leading is concerned.

ER: And the next item is "I feel helpless when I have to stand up for my rights and express my feelings." This is the ability to stand up and say what you like and what you don't like, what you want and what you don't want and so forth. How do you deal with this in general in most situations?

EE: Not well at all. When it comes to this and standing up and to say this or that, I feel it very embarrassing to say what I want to say. Normally I come to tutorials and I tend to keep quiet because when I do say something that I want to say, it comes out totally stupid. I can't do public speaking or anything like that. But my God, I'm not very good at that.

ER: If someone is disturbing you, is it difficult for you to say "hey that bothers me"?

EE: To someone else?

ER: Yes.

EE: I wouldn't get nasty about it. I mean...I wouldn't get nasty about it. I would just go along with things.

ER: The next one is "When trying to solve a problem, I look at both the pros and cons of each possible solution and then decide on the best course of action." The situation could be any particular problem you have. It doesn't have to be a very serious problem but problems in general that you have to deal with. This is looking at the way one goes about solving the general everyday problems. Either looking at every possible solution or just straight away going for a solution.

EE: Generally, I go for a solution straight away. I would just prefer to go and do it. Generally, its the first solution that comes, and I try it out to see if I get a reasonable answer. I don't like, you know, going through stages. Just go straight into a problem and get it sorted out as soon as I can. It's a very broad item, I think. I suppose I do it straight away and try to get it done straight away.

ER: Do you think that you're a pretty good problem-solver or not so?

EE: I'm not a good problem-solver. I'm not good at it at all, not really.

ER: The next item is "I think that there's only one real way of looking at most things in life." Could you expand upon the way in which you go about looking at things. People sometimes think that there's one answer or there's one way of doing something and I'm going to find that way and do it. Or some people say that there are possibly a number of ways of doing it. Looking at yourself, how do you see it? One way, one answer or do you look at different possibilities.

EE: No. I figure that there are other possibilities. You mean ways of life and that sort of thing? Well, I know there are other ways of life. I've been to England, so...So, I don't see only one way. I look for the best way that suits me at the moment. Ah...like the way of life in England, I know, is different than in Zimbabwe where I came from. So, I think there are many different ways. I mean...I think you just have to look at all the different things that there are. This is what I tried to do last year when I dropped out of B.Com. So, I was trying to find out what to do. So, eventually I decided to stay here.

ER: Do you think, in general, it is easy or difficult for you to stop, change gears and do something else? Is that difficult or easy for you?

EE: It's not too difficult really. Coming to university didn't change me too much. I can adjust unless the adjustment is to bad situations. But generally it doesn't cause any problems.

ER: O.K. the next item is "I try to see things as they really are, without fantasizing or daydreaming about them." Here, what I would like you to expand upon is the issue of checking things out. You might have an idea, a feeling, a thought or whatever; and some people say "I'll go with that idea, dream or whatever irrespective." And other people say "Wait a minute, I better sit down and check this out to see if that's the way things really are out there." How do you think you are in general?

EE: Well, politically I'll just go along with it. When it comes to other things...ideas and...I find that I do a lot of day dreaming you know.

Sometimes, you know, I sort of...I kind of often daydream that I'm inventing something. And these daydreams can go on and on. They also have to do with money as well sometimes. Like buying a lottery ticket, and within a week, I've decided what I'm going to do with that money, even though I haven't won it. But if it's a scientific type of idea, I like to check it out. Politics, I don't worry about.

ER: But if you had some sort of an idea, like what you said in the beginning about an inferiority complex, and you feel people see you in such a way, would you try to check it out someway maybe by asking others? Or would you just stay with that idea and feeling inside of you?

EE: Generally, I would stay with that thought inside of me. But...what I've learned in socialization...sort of a mirror image, like watching other people to see what their reaction to you is. I tend to do that a lot and get pretty annoyed with what they think of me and change a lot because of it.

ER: With these day dreams, is it easy or hard for you to pull out of them?

EE: If I am not doing anything, I'm quite happy to let it go on and on. But if I got work to do, then I can sort of pull out. But, it's difficult sometimes. Like this morning, I was reading and just floated away. In ten minutes, I just read one paragraph. When I'm like that I just give up. I'm always imaging, if something is wrong... I find that I have a really bad fear of punishment. I've got a really bad fear of punishment. It's not like guys who miss a period of school and go home. That use to set up inside of me great panic and guilt. Though I knew that punishment is not really bad, but the fear of being caught always terrified me. I don't know why it is. Like teen age stunts, that sort of thing I can't do. The idea of somebody coming and shouting at me. Other people, getting in trouble doesn't seem to worry them.

ER: The next item I think is quite similar to that: "I tend to take difficult situations too seriously and become overwhelmed." Not every day little problems, but bigger problems and serious ones. How do you generally stand up against it? Do you get overwhelmed or...?

EE: Yeh. I think I do. Like last term with B.Com. It got worse and worse. Like I thought that if I went home, my parents would be angry because they wasted money. If I stayed here, I knew I failed. So, it got into a vicious circle. It just got worse and worse. Eventually, I was almost in a suicidal stage. It was actually pretty bad. And my folks came down and spoke to me and...I just got in a terrible mess. That's why I like decisions to be made for me a bit more because I got a big problem. I tend to keep to myself, and then I just get worse and worse...

ER: The next one is "I try to develop and expand those activities which I enjoy." The things that you like, hobbies, things that you're interested in. Do you try to work on them, or do you neglect it? Do you just think it's interesting and don't do too much about it or the opposite?

EE: I like to go into it to a certain stage, and then I let it go. I really like to learn a lot about everything, and I always listen if

someone tells me something new, especially if it's scientific. But I have never taken anything really far except for one thing which is organ maintenance. You know, pipe organs. I have taken that quite far. I took it to a level where I could be employed in it. You know, get a job.

ER: Did you enjoy it?

EE: Initially, I started out with basic aspects like tuning for a long time. But other things began to interest me in the mechanism. And that's really the only hobby that I have really taken far. But other things like computers... I got interested in computers, and I bought a small one, a Sinclair 81. I got to as far as I could with it, and then I dropped it. I could have done Computer Science this year, but I didn't. General electronics, I sort of started off, and then it came to a low pass. I generally didn't take anything really far.

ER: With the pipe organ, would you like to go further with that, or...?

EE: Yeh. I once considered it. Once I got interested, I got thinking about it as a career. But, all pipe organs are going out now, so in 20 years, I doubt if there'll be any left. It's sort of a dead end job I think.

ER: Do you think that you'll find another hobby?

EE: Yeh. Well, as far as a hobby goes, pipe organs will always be there. But as far as building new ones goes, there's very little market.

ER: The last item is "It's hard for me to enjoy life." This is trying to tap how much you really, in most situations, really enjoy life or don't enjoy life.

EE: Ah...I didn't enjoy school. I didn't enjoy school at all. I found it very hard to make friends. So I didn't enjoy life at school at all. But at university, I got friends and things. University life, I like very much. You know, your life changes. I mean...ah...I think you can enjoy life if you make what you want of it. Sometimes, I find it hard to enjoy life. I take things to the extreme, like exams. Sometimes I worry very much about exams. So, I don't know. It's...Your outlook on life changes. Like with me, it changed from day to day.

APPENDIX T: OTHER-OBSERVER (O-01/O-02/O-03) RATINGS OF THE INTERVIEWEES

No.	O-O	SR	IPR	I	R	A	P-S	F	RT	ST	S-A	H	MH1	MH2	MH3
1	1	5	5	5	4	5	5	5	5	5	5	5	4.9	4	2
	2	4	4	5	5	5	5	3	6	5	5	5	4.7	4	2
	3	4	4	4	4	4	5	4	5	5	5	4	4.4	4	2
2	1	5	5	6	5	6	5	5	5	3	5	5	5.0	5	3
	2	5	4	5	4	6	4	5	5	3	5	5	4.6	4	2
	3	5	4	5	4	5	4	5	5	3	5	5	4.5	5	3
3	1	5	3	5	5	4	3	5	3	5	6	3	4.3	2	1
	2	4	3	4	3	3	5	4	3	3	4	3	3.5	3	1
	3	4	3	3	4	3	4	4	3	4	4	3	3.5	3	1
4	1	4	4	5	4	4	5	5	5	5	5	5	4.6	4	2
	2	4	4	5	4	4	6	5	5	5	5	5	4.7	5	2
	3	4	4	4	4	4	5	5	5	4	5	5	4.4	4	2
5	1	3	6	5	6	6	5	5	5	5	4	5	5.0	6	3
	2	3	5	5	6	6	5	5	5	5	5	5	5.0	5	3
	3	4	5	5	5	5	4	5	5	5	5	5	4.8	5	3
6	1	5	5	5	5	5	6	5	5	6	5	5	5.2	5	2
	2	4	5	5	6	4	5	4	5	5	5	5	4.8	5	2
	3	4	5	5	5	4	5	4	4	5	4	4	4.4	5	2
7	1	4	4	5	3	4	3	5	5	5	6	5	4.4	5	2
	2	4	3	5	4	5	4	5	5	4	5	4	4.4	4	2
	3	4	4	5	3	4	3	5	4	5	5	4	4.2	4	2
8	1	5	5	6	4	5	5	6	5	5	6	6	5.3	6	3
	2	5	5	5	4	3	5	5	5	4	5	5	4.6	5	2
	3	4	4	5	3	4	5	5	4	4	4	4	4.2	4	2
9	1	3	3	5	4	5	5	5	5	4	3	3	4.1	3	1
	2	3	3	5	4	4	5	5	5	4	3	4	4.1	3	1
	3	3	4	4	3	5	4	5	4	3	3	3	3.7	3	1
10	1	5	4	5	5	5	5	5	5	5	6	5	5.0	4	2
	2	4	3	5	5	3	5	5	4	5	5	4	4.4	4	2
	3	4	4	4	5	4	4	3	4	4	4	4	4.0	4	2
11	1	5	4	3	5	6	4	6	5	6	5	6	5.0	5	3
	2	5	4	3	4	5	4	5	5	5	5	6	4.6	5	3
	3	5	4	3	4	5	4	5	5	5	5	5	4.5	5	3
12	1	4	4	5	6	3	6	5	6	3	5	5	4.7	4	2
	2	3	4	4	5	3	5	5	5	3	4	4	4.1	3	1
	3	3	4	4	5	3	5	5	5	3	4	4	4.1	3	1
13	1	5	6	5	6	5	3	5	4	5	5	5	4.9	5	3
	2	5	5	3	5	5	4	6	4	4	5	5	4.6	5	2
	3	5	4	3	5	5	4	5	4	4	5	5	4.4	5	3

No.	O-O	SR	IPR	I	R	A	P-S	F	RT	ST	S-A	H	MH1	MH2	MH3
14	1	4	5	3	5	5	3	4	3	3	5	5	4.1	5	2
	2	4	5	3	4	4	4	4	3	3	4	5	3.9	3	2
	3	4	4	3	4	4	4	4	3	3	4	4	3.7	3	2
15	1	5	4	5	5	6	5	5	5	5	4	6	5.0	5	3
	2	5	5	5	4	5	5	5	5	5	4	5	4.8	5	3
	3	5	5	5	4	5	4	4	5	4	4	5	4.5	5	3
16	1	3	3	4	5	5	5	6	5	3	5	3	4.3	3	1
	2	4	3	3	5	4	4	4	4	3	5	3	3.8	3	1
	3	4	3	3	5	4	4	5	4	3	5	3	3.9	3	1
17	1	4	6	2	5	3	3	5	6	4	6	6	4.5	5	3
	2	4	5	2	5	3	4	4	5	3	5	5	4.1	4	2
	3	4	5	3	4	3	4	4	5	3	5	5	4.1	4	2
18	1	5	4	5	5	5	5	5	5	5	5	5	4.9	5	2
	2	5	5	5	5	4	5	5	4	4	5	5	4.7	4	2
	3	5	4	4	4	4	5	4	4	4	4	4	4.2	4	2
19	1	5	5	4	5	4	5	5	6	5	5	5	4.9	5	2
	2	5	5	4	4	4	5	4	6	3	5	4	4.4	4	2
	3	4	5	4	4	4	4	4	5	3	5	4	4.2	4	2
20	1	5	3	3	5	3	4	5	3	5	3	5	4.0	4	2
	2	4	4	3	5	3	4	5	4	5	3	5	4.1	5	2
	3	5	3	4	4	3	4	5	4	4	3	4	3.9	4	2
21	1	4	5	4	5	5	4	6	6	3	5	5	4.7	4	2
	2	4	5	4	5	4	5	5	5	3	5	5	4.5	4	2
	3	4	4	4	4	4	4	4	5	3	4	4	4.0	4	2
22	1	4	3	6	6	5	5	5	3	3	3	3	4.2	3	1
	2	4	4	5	5	5	4	5	3	3	3	3	4.0	3	1
	3	4	3	5	5	5	5	5	4	3	3	3	4.1	3	1
23	1	5	5	5	5	5	5	5	5	5	5	5	5.0	5	3
	2	4	4	5	3	5	5	5	5	5	5	5	4.6	5	3
	3	4	4	5	3	4	5	4	5	4	5	4	4.3	4	2
24	1	3	3	3	5	2	3	5	3	2	5	4	3.4	3	1
	2	2	3	3	4	3	3	5	3	3	3	3	3.2	3	1
	3	3	3	3	4	2	3	5	3	2	4	3	3.2	3	1
25	1	5	5	5	6	5	6	4	5	5	5	5	5.1	6	3
	2	5	5	5	6	5	6	5	6	5	6	5	5.4	5	3
	3	5	5	5	5	5	5	5	5	4	5	5	4.9	5	3
26	1	5	6	5	6	6	4	6	5	3	5	4	5.0	4	2
	2	5	5	6	5	6	4	5	5	3	4	5	4.8	5	2
	3	4	5	5	5	5	4	5	4	3	4	4	4.4	4	2

No.	O-O	SR	IPR	I	R	A	P-S	F	RT	ST	S-A	H	MH1	MH2	MH3
27	1	5	5	5	5	5	6	5	6	5	6	5	5.3	5	2
	2	5	4	5	4	5	5	4	5	5	5	4	4.6	4	2
	3	5	5	5	5	5	5	4	5	5	5	5	4.9	5	3
28	1	5	5	3	4	4	4	5	3	4	5	5	4.3	4	2
	2	5	5	3	3	3	4	5	3	3	5	4	3.9	3	1
	3	4	4	3	3	4	4	5	3	4	5	4	3.9	3	1
29	1	5	6	5	5	6	6	6	5	6	5	5	5.4	5	3
	2	5	5	5	5	5	5	5	5	5	5	5	5.0	5	3
	3	5	5	5	5	5	5	5	5	5	5	5	5.0	5	3
30	1	5	5	5	5	6	5	5	3	3	5	5	4.7	5	2
	2	4	5	5	5	5	5	5	4	3	5	5	4.6	4	2
	3	5	4	5	4	5	5	4	3	3	5	5	4.4	4	2
31	1	5	5	6	5	3	5	3	4	5	3	5	4.4	5	2
	2	4	5	5	5	3	5	3	5	5	3	4	4.3	4	2
	3	4	5	4	4	3	5	3	4	5	3	4	4.0	4	2
32	1	5	4	5	4	4	5	5	5	4	4	4	4.4	4	2
	2	5	4	5	5	3	5	4	5	3	5	4	4.4	3	2
	3	4	4	4	5	3	5	4	5	3	4	4	4.1	4	2
33	1	5	5	5	5	3	5	5	4	5	4	5	4.6	5	3
	2	5	5	5	5	3	5	4	4	4	4	5	4.4	4	2
	3	4	4	4	4	3	5	4	4	4	3	4	3.6	4	2
34	1	6	6	5	3	6	4	6	3	6	6	6	5.2	3	1
	2	6	5	4	3	6	4	6	3	5	5	5	4.7	3	1
	3	5	5	4	3	5	3	5	3	4	5	5	4.3	3	1
35	1	5	5	6	5	6	6	6	5	5	6	5	4.9	4	2
	2	5	4	5	4	6	5	6	5	4	5	5	4.9	5	3
	3	5	4	5	4	5	5	5	5	4	5	5	4.7	5	3
36	1	5	6	6	4	6	4	5	5	5	3	5	4.9	5	3
	2	5	4	5	5	5	4	5	5	5	3	5	4.6	5	2
	3	5	4	5	4	5	4	4	5	4	3	4	4.3	4	2
37	1	4	5	5	5	5	4	5	5	5	5	5	4.4	4	2
	2	4	5	4	4	5	4	4	4	5	5	5	4.5	4	2
	3	4	5	4	4	5	4	4	4	5	4	4	4.3	4	2
38	1	4	4	3	4	3	4	3	5	3	5	4	3.8	3	1
	2	3	5	4	5	3	3	5	6	3	3	5	4.1	4	2
	3	4	5	4	5	3	4	5	6	2	4	5	4.3	4	2
39	1	5	4	5	5	6	5	5	5	3	5	4	4.7	4	2
	2	5	4	5	5	5	5	4	4	3	5	4	4.4	5	3
	3	5	5	5	5	5	4	5	5	3	5	4	4.6	5	3

APPENDIX U: WRITTEN REQUEST TO TEST SUBJECTS AT THE PORT ELIZABETH PSYCHIATRIC HOSPITAL OUT-PATIENT CLINIC

18 July 1984

Prof. J. Fullard
Psychology Department
University of Port Elizabeth
PORT ELIZABETH

re: Request for permission to have patients fill in a mental health questionnaire .

Dear Prof. Fullard

This letter is in response to our telephone conversation this morning.

I would like to receive permission to have out-patients fill in a questionnaire related to personality predispositions of mental health.

The questionnaire contains 130 items related to 11 personality predispositions of mental health. This represents an important aspect of my doctoral research which is being conducted at Rhodes University (please note enclosed Doctoral Research Outline).

At this stage of my research, I would like to analyse the responses of a clinical population to these items. It will take between half an hour to one hour to complete the questionnaire, and the respondents will be able to fill it in in their own time. I am interested in only English-speaking whites between the age of 17 and 30 who are coherent enough to respond to a questionnaire. It is preferable that they be matriculated from high school.

Enclosed are 30 questionnaires. I have also included a curriculum vitae.

Please advise me if you would like to meet in order to receive additional information or clarification.

Thank you and sincerely yours

Mr. Reuven Bar-On

APPENDIX V: FACTOR LOADINGS ON THE FIRST 14 FACTORS FOR THE 77 ITEMS THAT WERE ANALYSED (VARIMAX ROTATIONS)--(without dec. points)

ITEM	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14
108	08	52	12	01	06	-01	05	29	00	-14	-00	06	-05	-05
38	29	67	07	06	26	15	-02	-06	09	06	-10	02	-03	06
122	20	70	05	23	25	14	02	14	12	04	-08	05	-02	03
10	21	64	05	05	23	05	04	18	07	-08	-01	05	-08	01
52	23	78	14	06	08	01	07	-18	08	-03	05	-02	13	07
80	14	73	10	13	-01	11	08	-15	02	01	14	-02	18	09
136	15	69	03	11	30	15	-07	03	-03	17	-15	06	04	04
17	52	14	06	07	01	15	-06	10	15	00	01	51	03	09
87	29	09	17	23	03	05	02	12	-08	08	-01	58	04	-04
3	37	06	06	05	-13	03	11	38	00	-11	20	28	-01	20
45	49	14	14	15	07	26	-02	46	02	03	06	16	04	04
73	37	-01	39	-08	06	22	-07	34	05	-16	17	21	25	-21
31	27	11	03	39	-06	04	-12	25	-14	13	12	05	05	11
59	48	07	14	12	-05	06	-10	52	-04	-12	-01	10	-06	-01
21	23	17	15	08	02	16	11	19	22	-08	12	14	05	06
35	38	12	05	02	13	-01	-16	03	29	10	17	-08	15	05
119	08	09	07	-05	02	06	-07	01	16	-03	-06	07	52	08
133	-06	04	08	02	01	07	-08	-01	03	-04	-11	00	07	12
77	55	24	15	08	12	01	-11	-02	05	-26	-08	-11	15	05
91	25	06	12	11	13	09	-19	10	08	-14	18	-08	30	13
105	41	-12	13	05	-10	01	-13	04	12	02	-03	-05	33	03
26	16	13	26	28	08	06	35	05	04	22	08	04	07	01
40	-08	10	10	17	05	03	58	-01	-02	05	01	02	-11	-01
96	-15	-02	24	12	13	16	59	12	06	12	-10	-04	-05	00
124	02	03	15	50	06	05	26	03	17	11	12	-11	10	-02
54	19	03	18	50	06	-03	33	-08	02	04	14	13	14	-03
82	09	03	21	33	15	03	31	-18	-14	15	18	02	05	-06
110	-16	-02	07	15	20	10	71	-03	-04	03	-02	-03	-06	12
11	10	-09	08	09	08	18	-02	12	-12	10	39	07	11	-06
67	-02	-01	-14	11	-04	01	19	03	-02	-01	50	10	-38	13
81	-08	02	-02	08	-01	-05	-03	-04	12	09	52	04	-04	-10
137	13	-10	04	-00	03	07	-03	07	05	16	41	-10	03	08
25	31	-01	14	04	12	16	00	06	-12	27	24	-16	15	10
53	-08	03	05	23	12	07	06	-07	02	62	22	-08	01	02
123	-04	-02	-02	14	24	01	19	-00	02	69	12	14	-09	00
15	12	02	56	05	04	02	-00	12	15	01	08	-07	08	07
127	33	12	35	14	02	10	10	37	02	13	03	-02	12	-04
1	07	14	52	05	08	08	-01	14	23	-10	08	06	05	09
85	-03	13	56	13	16	31	11	00	-05	03	-12	09	04	08
29	-00	09	66	05	12	12	13	-05	02	-02	-00	07	02	02
43	08	10	75	02	13	06	06	01	06	01	02	02	02	06
71	23	14	43	11	11	12	09	12	-09	05	-09	05	15	05

ITEM	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14
20	04	16	03	68	11	06	-02	-05	10	-04	-04	-05	-05	02
48	00	13	03	53	19	09	06	-02	07	13	15	18	16	12
6	-05	07	13	56	11	17	14	12	-00	11	08	10	-18	10
76	02	07	04	63	17	06	10	-10	-20	06	04	07	-02	09
118	19	03	03	44	13	12	10	23	17	09	13	04	16	09
90	12	09	10	61	01	01	15	19	-00	06	-11	02	-12	-08
34	09	42	11	36	32	15	23	14	09	08	-01	18	05	03
61	12	06	12	-00	12	04	-06	00	64	-03	15	-07	10	-00
5	04	12	19	10	21	05	02	-00	16	02	-03	03	06	67
47	12	17	13	07	04	03	05	-04	54	09	02	15	16	21
131	23	04	28	07	10	01	10	05	34	-03	-17	-08	00	26
33	12	03	36	18	21	-01	18	-01	04	14	-01	04	03	20
89	-01	02	17	08	28	11	09	02	07	05	10	-04	22	35
103	11	-07	37	10	13	13	09	-09	10	11	-05	03	-12	10
36	17	14	03	13	62	07	00	-13	-01	13	03	-05	02	-02
64	07	19	06	09	63	04	14	-05	-04	-01	05	-02	-09	11
78	03	12	03	05	63	10	11	-01	08	07	-04	02	15	04
8	03	12	26	24	39	03	24	15	07	-12	07	15	-03	22
50	08	19	34	11	58	06	10	10	-01	06	-04	08	01	04
92	-00	24	30	20	52	-03	19	09	05	-00	-01	09	-12	17
106	10	16	14	08	64	-00	-04	06	18	16	06	-05	03	02
72	26	41	24	08	27	26	11	25	-23	03	-01	06	06	-03
128	30	11	35	11	02	55	21	16	01	-00	03	-01	02	02
44	25	18	12	20	13	64	12	-03	-01	15	-02	12	07	-01
100	15	13	15	04	04	62	02	-01	13	-03	14	04	00	02
114	25	11	20	10	13	53	04	13	-04	04	-04	-07	05	16
58	18	13	39	16	03	33	16	20	-09	-03	-04	19	06	-14
86	40	27	40	19	01	36	17	21	02	-01	-08	02	13	-12
98	65	33	13	10	28	05	-08	-02	12	02	-10	-05	-02	-04
42	68	22	05	03	29	02	-06	-01	09	06	-01	06	-04	-02
56	64	25	02	-04	03	13	12	10	00	06	-01	-01	06	04
70	53	40	14	13	30	07	-09	-03	11	05	-05	-01	04	-01
112	71	09	07	05	02	10	-08	-00	03	-05	04	12	07	-00
126	57	06	08	-01	-10	19	05	28	04	-09	14	02	-01	09
140	68	11	-00	05	03	21	-07	05	05	01	08	21	-00	-02

APPENDIX W: FACTOR LOADINGS FOR THE 77 ITEMS THAT WERE ANALYSED WITH A VARIMAX ROTATION AND LIMITED TO 14 FACTORS--(without dec. points)

ITEM	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14
108	11	50	13	03	06	06	-02	-02	-19	-00	05	28	-05	05
38	27	68	06	05	27	01	13	08	06	-10	02	-07	08	04
122	21	69	06	23	26	04	14	11	01	-08	00	13	03	06
10	23	63	04	05	24	08	02	05	-10	-01	10	17	03	08
52	18	78	15	07	07	01	03	10	-03	04	01	-18	06	-08
80	09	73	11	15	-01	-01	12	10	03	09	00	-10	03	-04
136	15	69	03	10	30	-05	14	-01	19	-15	01	05	05	08
17	57	13	08	07	03	-05	14	16	00	01	-02	04	08	46
87	35	07	20	26	02	00	04	-07	06	00	09	06	-05	50
3	45	04	08	07	-12	09	03	02	-09	19	-11	32	16	22
45	58	13	16	17	07	-03	24	02	03	07	-03	38	04	11
73	45	-01	42	-08	04	-11	20	10	-12	17	16	29	-23	15
31	32	13	03	40	-10	-14	-02	-12	16	15	07	16	14	02
59	57	06	15	15	-06	-08	02	-09	-15	02	07	38	04	04
21	27	16	17	08	02	13	14	17	-11	15	32	10	10	09
35	32	14	03	01	16	-18	-02	37	11	08	21	03	-02	-02
119	09	09	11	-06	-00	-16	09	25	05	-08	25	04	02	01
133	-08	04	07	02	02	-07	06	03	-07	-13	50	-01	12	04
77	50	26	15	06	15	-15	02	12	-23	-14	16	-06	-03	-14
91	25	06	14	09	14	-24	12	16	-10	14	26	09	06	-12
105	38	-12	16	05	-08	-20	04	21	03	-08	29	-01	-04	-12
26	17	12	27	27	10	34	06	08	25	07	05	03	-03	02
40	-08	11	11	19	03	57	01	-04	05	02	-04	-02	-00	03
96	-11	-04	27	13	13	60	18	02	11	-07	-18	12	01	-06
124	00	03	16	52	06	23	05	17	06	11	31	-02	-03	-14
54	19	04	18	47	06	31	-04	05	12	13	33	-13	-02	10
82	06	04	21	33	15	28	03	-11	18	17	16	-22	-08	-01
110	-17	-02	10	17	19	69	12	-05	02	-01	04	-02	09	-03
11	15	-11	11	09	08	-03	21	-11	09	38	10	07	-07	-02
67	01	-05	-17	12	-03	25	-04	-07	-01	46	-08	01	15	16
81	-08	03	-03	08	-02	-03	-06	13	08	53	-10	-04	-11	05
137	12	-09	04	01	03	-05	06	08	14	40	00	04	06	-12
25	34	-00	14	02	12	-01	16	-10	34	27	04	-01	12	-22
53	-11	04	03	24	13	06	06	06	63	21	-05	-04	01	-05
123	-04	-04	-02	18	25	21	02	01	59	13	-06	-01	01	13
15	12	03	54	06	02	-02	-01	18	05	05	05	10	06	-05
127	39	11	37	15	01	08	08	04	15	03	06	32	-05	-08
1	12	11	52	03	08	03	08	19	-10	10	17	09	13	02
85	-02	11	57	12	18	11	33	-03	02	-12	05	01	03	07
29	00	10	67	05	10	11	11	03	01	-00	-07	-06	02	06
43	07	11	75	03	10	04	04	05	-01	03	05	-04	08	-01
71	22	12	44	10	16	06	17	-00	06	-14	08	12	-06	04

ITEM	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14
20	05	16	02	64	10	01	05	05	-01	-00	-10	-09	06	-06
48	-01	14	04	53	18	01	09	15	17	11	11	02	05	20
6	-04	07	12	57	11	15	14	-02	07	06	-11	11	08	14
76	00	06	05	61	19	09	10	-17	05	02	09	-11	04	05
118	22	02	05	45	12	07	12	20	08	13	12	18	07	-01
90	14	08	11	63	-00	15	-01	-05	01	-09	-08	12	-06	-02
34	12	42	13	39	29	21	14	09	09	01	-03	13	04	16
61	11	06	12	-01	12	-05	02	64	-06	14	-03	-01	02	-08
5	01	12	20	11	22	00	07	20	01	-04	15	01	59	04
47	10	17	13	07	05	05	03	60	08	-02	13	-03	18	16
131	22	04	28	08	10	12	-00	31	-06	-16	08	-01	29	-10
33	13	05	35	17	18	18	-05	03	19	01	19	-06	24	05
89	-02	03	19	09	25	04	11	11	09	11	26	02	34	-07
103	09	-06	36	11	13	12	11	04	05	-01	08	-15	14	00
36	10	15	03	13	64	-01	08	03	12	01	08	-13	-04	-04
64	05	20	08	10	63	15	03	-06	-02	07	-02	-07	14	-03
78	03	13	05	05	60	10	09	09	12	-02	13	01	07	02
8	05	11	30	28	36	21	04	04	-16	10	-02	12	22	10
50	09	20	35	13	56	08	05	-00	08	-04	-07	10	04	09
92	-01	24	31	24	50	19	-04	02	-05	-01	-04	09	18	10
106	07	14	16	09	66	-03	02	20	12	05	-06	07	01	-06
72	27	42	25	10	27	09	25	-16	06	-05	12	24	-09	08
128	33	12	35	11	02	21	51	04	03	02	01	12	00	01
44	25	20	13	20	13	11	64	02	15	-02	08	-06	-03	12
100	17	15	15	05	02	03	56	11	-03	16	10	-04	06	04
114	27	11	22	11	14	03	55	-03	02	-03	02	08	14	-12
58	21	14	40	19	01	12	30	-07	-04	-05	17	17	-15	18
86	44	27	43	20	00	14	35	04	-00	-08	03	14	-15	-05
98	61	36	11	09	29	-07	01	13	02	-12	05	-10	-03	-04
42	66	23	04	03	33	-05	00	11	06	-03	-06	-10	-03	04
56	64	27	03	-03	05	10	12	03	07	-03	10	01	02	-06
70	51	41	12	11	32	-07	05	12	07	-07	12	-10	-00	-02
112	69	12	07	06	02	-12	07	07	-03	03	02	-10	-01	06
126	64	05	08	-02	-08	06	18	04	-05	14	-15	18	07	-04
140	70	12	01	05	03	-08	19	05	00	09	-04	-07	-00	14

APPENDIX X: FACTOR LOADINGS FOR THE 77 ITEMS THAT WERE ANALYSED WITH A VARIMAX ROTATION AND LIMITED TO 12 FACTORS--(without dec. points)

ITEM	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12
108	13	17	50	03	05	02	-01	-05	-03	-28	01	08
38	27	04	67	05	29	02	12	12	-09	09	02	02
122	22	08	68	24	26	02	14	11	-07	-06	-04	08
10	24	07	63	06	23	05	03	06	-03	-17	07	10
52	17	12	77	06	08	03	01	15	01	06	06	-13
80	09	10	73	15	-00	01	10	12	08	06	02	-06
136	16	04	67	12	33	-06	15	01	-09	12	-04	12
17	58	07	13	07	03	-02	11	19	-01	-02	01	42
87	36	20	07	26	02	02	01	-06	-02	03	11	48
3	46	09	03	08	-10	11	04	07	18	-32	-12	25
45	59	21	12	20	08	-06	25	02	11	-20	-11	18
73	46	48	01	-08	-01	-17	17	-00	15	-16	09	18
31	31	03	10	42	-04	-11	01	-05	20	-04	04	07
59	57	20	05	17	-05	-11	04	-07	03	-34	02	09
21	28	19	15	09	02	10	14	21	12	-16	32	08
35	33	04	14	02	14	-23	-02	33	13	10	12	01
119	09	13	09	-05	-00	-21	09	25	-04	06	18	04
133	-08	07	02	03	03	-11	07	10	-13	-04	48	03
77	50	15	26	04	12	-19	00	11	18	-08	17	-20
91	24	15	06	09	13	-28	11	17	14	-13	22	-11
105	37	18	-12	06	-09	-26	04	19	-03	09	22	-12
26	17	30	12	30	11	31	06	07	12	18	01	05
40	-08	12	11	20	04	56	02	-03	01	04	-01	02
96	-11	31	-04	15	14	56	19	02	-04	02	-20	-03
124	-00	19	03	52	05	17	05	16	12	07	27	-13
54	19	19	05	48	06	28	-06	07	12	16	35	07
82	05	21	05	32	15	28	00	-11	18	26	21	-05
110	-17	13	-02	18	21	66	13	-01	-03	-01	07	-04
11	15	13	-10	09	07	-04	19	-14	40	-00	10	01
67	01	-20	-01	12	-01	31	-04	-01	41	-13	01	14
81	-07	-04	04	07	-05	-01	-09	07	49	05	-08	06
137	11	03	-09	02	04	-04	06	09	45	02	-02	-08
25	31	13	-02	05	17	01	18	-03	36	17	01	-16
53	-12	04	02	28	18	06	09	06	36	44	-13	05
123	-04	-00	-05	22	30	22	05	01	27	41	-13	21
15	11	54	02	07	04	-05	-02	21	09	-03	-00	-03
127	38	43	09	19	03	02	10	02	11	-04	-05	02
1	11	51	11	03	09	01	06	25	09	-15	17	01
85	-02	57	11	12	20	10	31	01	-12	03	06	06
29	-01	64	10	04	12	13	07	07	-02	04	-03	03
43	06	71	11	02	13	05	01	12	03	-01	08	-04
71	23	48	12	11	16	01	17	-01	-10	03	02	06

ITEM	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12
20	04	-01	16	61	11	03	03	07	-02	02	-06	-10
48	-00	04	14	54	19	-00	08	16	13	10	08	22
6	-04	12	07	58	13	16	13	01	07	-06	-10	15
76	-00	03	06	60	21	11	09	-13	00	08	14	01
118	22	08	02	47	12	03	13	20	17	-06	06	03
90	15	14	07	64	-00	13	-01	-07	-09	-05	-11	-02
34	13	15	41	40	30	19	14	09	03	-02	-06	18
61	11	11	08	-02	08	-09	-01	56	13	-01	-05	-08
5	-00	13	09	13	31	05	10	41	-02	-13	17	01
47	10	12	17	07	06	02	03	64	00	08	09	16
131	21	25	02	08	14	11	02	42	-15	-08	07	-13
33	11	31	02	19	25	19	-03	16	05	10	19	03
89	-03	16	00	10	31	04	14	25	14	-04	24	-05
103	08	33	-07	11	16	14	10	13	-01	09	13	-05
36	11	03	16	12	62	-03	06	00	02	18	08	-05
64	05	05	19	09	64	16	02	-01	04	-04	03	-06
78	03	06	13	06	60	07	10	10	00	08	10	03
8	05	28	11	27	39	23	03	13	05	-27	03	07
50	09	35	19	13	57	07	04	02	-02	-01	-09	11
92	-01	29	23	24	53	20	-05	10	-03	-14	-02	08
106	08	16	15	09	65	-07	02	16	09	06	-11	-03
72	29	32	41	12	27	04	26	-19	-02	-06	05	14
128	33	39	12	12	03	18	50	05	04	-03	-01	03
44	26	16	20	21	13	10	62	01	01	18	08	12
100	17	15	16	04	02	03	52	13	14	-01	13	02
114	26	23	10	12	17	02	56	03	01	-06	01	-10
58	22	46	15	19	-01	07	28	-11	-05	-05	14	20
86	44	49	28	20	-02	09	33	-00	-06	-01	-02	-02
98	61	11	36	09	28	-09	-01	12	-11	12	04	-09
42	66	03	23	02	32	-04	-02	10	-03	13	-06	-01
56	63	05	26	-02	06	08	13	04	01	05	07	-06
70	51	12	41	11	32	-08	03	13	-05	14	11	-05
112	68	06	12	05	01	-11	04	07	01	05	05	00
126	64	10	05	-02	-07	07	19	06	15	-18	-16	-03
140	70	-00	13	04	03	-05	16	05	08	04	-00	10

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