

PERCEPTIONS, KNOWLEDGE, AND ATTITUDES TOWARDS
EMPLOYEE WELLNESS PROGRAMMES AMONG PRIVATE HIGH
SCHOOL EDUCATORS IN SOUTH AFRICA

BY

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THESIS

Submitted in partial fulfilment of the requirements for the degree of
Master of Science

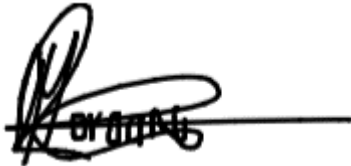
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DECLARATION

I declare that this thesis is my own, unaided work. It is being submitted for the Degree of Master of Science at Rhodes University, Makhanda/Grahamstown. It has not been submitted before for any degree or examination at any other University.

A handwritten signature in black ink, appearing to read 'Motheo Moroane', with a long horizontal line extending to the right.

Motheo Moroane

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This has been the most exciting yet challenging task and milestone I have ever embarked on thus far. In the challenging times of writing this thesis, I was pushed to be better and to keep going, especially when I no longer wished to.

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ABBREVIATIONS

ACA Affordable Care Act

ACAS Advisory Conciliation and Arbitration Service

CDR Crude Death Rate

AFL-CIO American Federation of Labor and Congress Industrial Organizations

AIDS Acquired Immunodeficiency Syndrome

ANOVA Analysis of Variance

ARV Antiretroviral Therapy

ASMR Age Standardized Mortality Rates

COPD Chronic Obstructive Pulmonary Disease

CPT Cotrimoxazole Preventive Therapy

CVD Cardiovascular Disease

DALY Disability-Adjusted Life in Years

DBE National Department of Basic Education

DBE RSA National Department of Basic Education of South Africa

EWP Employee Wellbeing Programme(s)

GDP Gross Domestic Product

HAART Highly Active Antiretroviral Therapy

HEWP Holistic Employee Wellness Programme

HIV Human Immunodeficiency Virus

HoD Head of Department

HR Human Resources

HREC Human Research Ethics Committee

HSRC Human Research Council

ILO International Labor Organization

IPT Isoniazid Preventive Therapy

ISASA Independent Schools Association of Southern Africa

LE Life Expectancy

MYPE Mid-year Population Estimates

NAEP National Assessment of Educational Progress

NCD Non-communicable Disease(s)

NDoH National Department of Health

NICD National Institute for Communicable Diseases

PEP Private Education for the Poor

ROI Return on Investment

SA South Africa

SAMRC South African Medical Research Council

SASA South African School Act

SANHANES South African National Health and Nutrition Examination Survey

SDT Self-Determination Theory

TB Tuberculosis

UK United Kingdom

UNDP United Nation Development Program

US United States

WHO World Health Organization

ABSTRACT

Organisations can perform more effectively if their employees' health and wellbeing are optimal and considered a priority. Evidence suggests that employee wellness programmes (EWP) increase employee and overall organisational health, effectiveness, and performance. The World Competitive Report has ranked South Africa poorly regarding Human Resource Management and Development. The South African education system accommodates more than 12,3 million high school learners, 2 938 primary and secondary schools and only 37 500 educators. The South African Department of Education has implemented several initiatives to improve education and the wellbeing of South African educators. However, research investigating the work-related health and wellbeing of educators indicates that burnout, job dissatisfaction, depression, anxiety, and infections, including HIV and AIDS, TB, and Malaria, are prominent among educators.

The objectives of this research were to explore whether age, sex, education, and years employed as an educator will significantly impact South African private high school educators' (i) perceptions, (ii) knowledge and (iii) attitudes toward employee wellness programmes, and to (iv) using the answers from a questionnaire; to propose a normative holistic employee wellness programme for private high school educators in South Africa. To fulfil these objectives a mixed-methods study approach was adopted. The study used a once-off, specifically designed questionnaire that explored EWP perceptions, knowledge, and attitudes among South African private high school educators.

The results of the questionnaire indicated that firstly, the highest education obtained significantly influenced how educators rated their knowledge of employee wellness programmes. Specifically, the higher the level of education/more educated educators were, the better employees rated their knowledge of wellness programmes. Secondly, gender emerged as a significant factor. Female educators were more inclined to better rate their perception and knowledge regarding whether the workplace could provide valuable source of information on employee health and wellbeing. In other words, female educators rated their knowledge and perceived the workplace as a potentially valuable source of information on employee wellness programmes, than men did.

Thirdly, educators with more than ten years of experience were more likely to participate in employee wellness programmes. Lastly, younger employees (younger than the age of 41 years) had the attitude that stigmas may prevent employees from participating in employee wellness programmes and seeking counselling, testing and treatment. Based on these findings, a tailored holistic EWP model was developed to address the specific needs of private high school educators, aiming to enhance their overall wellbeing. In conclusion, this dissertation emphasized the importance of EWP in improving the health and performance of educators in South Africa's private high schools. Importantly, this study identified unique challenges faced by these educators and highlighted the need for tailored wellness initiatives. Lastly, this study emphasizes the importance of addressing educator wellbeing to enhance the overall educational environment in South Africa.

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“In a society where stress and the lack of employee wellness has overtaken the common cold as the main reason for absence from work, where commercial output and profit are increasingly associated with positive correlations with employee welfare, it is no wonder that wellbeing is at the top of the agenda for policymakers, and business leaders around the world” (Black, 2009 and Cameron, 2010 cited in Ekwulugo; 2015: 32).

CHAPTER 1 | INTRODUCTION

1.1 Background and Literature

Companies must continually improve performance to remain competitive in a particular industry (du Preez, 2010; James, 2012; Dlamini, 2015 and Farida and Setiawan, 2022). Additionally, organisations can perform more effectively if employees' health and wellbeing are prioritised (du Preez, 2010). Some research has indicated that employee wellness programmes (EWP) increase employee and overall organisational health, effectiveness, and performance (Bessinger et al., 2006; James, 2012; Makhanya, 2021ilo). An EWP is "any programme designed to teach employees ways to increase their physical or mental health... and comes in various plans and delivery modes" (Edwards and Marcus, 2018; 24). These programmes are becoming popular in organisations as they recognise the importance of creating a healthy work environment that promotes the wellbeing of employees (Pescud et al., 2015; Stoewen, 2016).

A critical factor to successful and effective EWP is whether it was designed and implemented to improve the health challenges and problems specific to a particular industry and/or organisation (Sieberhagen et al., 2011; Dlamini, 2015; Wentzel, 2020; Makhanya, 2021). This has highlighted the importance of a needs analysis before designing and introducing EWP (Darling and Dannel, 2011). A needs analysis can be conducted through specifically designed or standard surveys to gain insights into employee challenges, perceptions, level of knowledge and attitudes toward these programmes (Dlamini, 2015). Additionally, these may determine why employees choose to participate in EWP or not, which may further increase the programme's effectiveness (Rakepa and Uys, 2012 in Dlamini, 2015; Hui et al., 2016). The educational sector is an industry where quality education, among other factors, is

dependent on the status of the educators' health and wellbeing (Human Sciences Research Council - HSRC, 2016). This may be influenced by factors such as the school environment, educators' mental and physical health, substance use and structural barriers (HSRC, 2016). High school educators, globally and those in South Africa, face high job demands and related stress that can ultimately lead to burnout and other health and wellbeing concerns (Vazi et al., 2013; Rabe-Steinberg, 2021; Agyapong et al., 2022; Bernstein and Batchelor, 2022). Research within a South African setting has highlighted that these factors further influence educators' teaching capacity (Peltzer et al., 2005; Cuevas and Lonsdale, 2014 in Dlamini, 2015).

Additionally, there is a high prevalence of growing diseases in the working-age population, demonstrated both in South Africa (Dlamini, 2015; Solanki et al., 2019) and globally (Allinder and Fleischman, 2019 in Pheiffer et al., 2021; Roser et al., 2021; ILO, 2022). The Annual Teacher Wellbeing Index (2019) cited in Kruger, 2019, aims to evaluate and monitor teachers' wellbeing, has reported that 75% of educators globally are stressed, and more than half have stated that they have considered leaving the profession due to mental and wellbeing challenges. The Index reported that 34% of educators suffer from poor mental health, which increased from 31% in the 2018 academic year (Kruger, 2019). Notably, 78% of educators experience behavioural, psychological and/or physical symptoms due to stressors related to their profession (Corrente, 2022). This percentage has increased from 76% in 2018 (Corrente, 2022). These statistics are growing yearly, highlighting the need for research and intervention within the education industry.

Enacted in 1996, the South African Schools Act (SASA) established the national schooling system, categorising schools into public/government and independent primary and secondary schools. Under state governance, public schools follow a quintile resource distribution system (HSRC, 2016; Mestry and Ndhlovu, 2014; Van Dyk and White, 2019). This system classifies schools based on economic status. The system classifies schools into five groups from the poorest (quintile one) to the least poor (quintile five) (Van Dyk and White, 2019). Public school educators typically work Monday to Friday on the academic programme, with a six-hour school day (HSRC, 2016). On the other hand, private school hours may vary and have more hours depending on various factors, such as if they are boarding school housemasters

(HSRC, 2016). Additionally, most of these educators are required to work extramural activity hours, either on the sporting field or in cultural activities such as chess, choir, etc. (HSRC, 2016). The Basic Education System in South Africa encompasses Pre-primary, Primary (Grade 1 to Grade 7), and Secondary Schools (Grade 8 to Grade 12). Pre-primary schools include Pre-Grade R for ages up to four years and Grade R for ages five to six years. After Primary school, students progress to Secondary School, and upon completion, they may choose Higher Education and Training or Tertiary Education.

The National Department of Basic Education (DBE) commissioned the Human Sciences Research Council (HSRC) (2016) to conduct a national survey to investigate the health and wellbeing of public school-based educators in South Africa in 2014. The study was conducted because of an analysis that suggested the South African education system was in a crisis (HSRC, 2016). This was primarily attributed to the Human Immunodeficiency Virus (HIV) epidemic, which is one of the four leading causes of death in South Africa (HSRC, 2016). However, there are numerous health challenges within the South African context which are collectively referred to as the quadruple burden of disease (HSRC, 2016). They are HIV/Acquired Immunodeficiency Syndrome (AIDS) and Tuberculosis (TB), Non-communicable Diseases (NCD), high maternal and child mortality, and high levels of violence and injuries (Achoki et al., 2022).

As a product of AIDS, there was related mortality, absenteeism, presenteeism and attrition due to low morale and job dissatisfaction in the education sector (HSRC, 2016; 13). However, there were also other reasons suggesting that various factors affect the health and wellbeing of educators in the school environment, including work dissatisfaction and overload, imbalanced work-life balance, and various other personal factors (Jamal et al., 2013; HSRC, 2016; Benevene et al., 2020; Raghupathi and Raghupathi, 2020). Additionally, most high school educators in South Africa who had considered a career change or expressed an intention to leave stated that it was due to poor salaries, heavy workload, too many demands, and an unhealthy working environment (Rajak and Thomson, 2003; HSRC, 2016; Kruger, 2019; Khanya, 2020; Rabe-Steynberg; 2021). Although these findings emphasise the high work demands placed on teachers, it is essential to highlight that this study was conducted in public

schools, with a clear gap in the literature concerning private schools. These challenges may differ due to various circumstances and factors within the private school setting. The findings further emphasise the need for an appropriate and context-specific EWP to mitigate these factors.

Additionally, it has been found that 80% of South African public schools (quintile one to three schools) cannot provide learners with the necessary skills and education they require (Nortje, 2017). This results from poor fund management by schools and the state, as various socio-economic factors impact learner attendance and staff qualification (Nortje, 2017). Rural public schools in South Africa tend to have less qualified teachers, an inadequate number of staff in relation to the number of students, poorly developed and maintained infrastructure, and limited access to critical social services and resources (Agbor, 2012; Gater and Isacs, 2012; and Cuyvers et al., 2011). Social services refer to the benefits or services provided by the state – such as education, food subsidies, healthcare, and subsidised housing (Nortje, 2017). Factors such as mental and physical health, school environment, lack of resources, and broader socio-economics factors interact to influence the capacities of public school educators (Peltzer et al., 2005; Raghupathi and Raghupathi, 2020). Overcrowded classrooms, a lack of infrastructure, resources, and access to social services negatively impact educators in public schools' wellbeing compared to educators in private schools, who do not face these challenges (West and Meier; 2020; du Plessis and Mestry, 2019; Jones et al., 2021; Barret et al., 2022

On the contrary, private secondary schools also face their own challenges and hurdles. The financial landscape is a significant hurdle for these private institutions, as they must carefully manage operational costs while striving to provide a high-quality education (Smith et al., 2021). This financial pressure arises from the unique funding model of private schools, relying heavily on tuition fees, endowments, and limited government support, necessitating meticulous financial planning for sustained operations, and enriched educational experiences (Van der Berg et al., 2016; Smith et al., 2021). In the competitive academic landscape, private high schools must distinguish themselves to attract and retain students amidst numerous alternatives. This competition places demands on continuous investments in educational resources, facilities, and distinctive programmes. Striking the right balance between

financial viability and offering an appealing educational experience adds complexity to the challenges private schools face in South Africa (Van der Berg et al., 2016).

Furthermore, maintaining a delicate equilibrium between sustainability and educational quality is an ongoing struggle. Private schools must navigate the challenge of ensuring financial sustainability while upholding high standards of education (Burton and Leoschut, 2012). Cutting-edge facilities, qualified educators, and diverse extracurricular opportunities contribute to a school's attractiveness but require substantial financial investment (Burton and Leoschut, 2012). The challenge lies in sustaining this balance to ensure that financial decisions maintain the quality of education provided (Burton and Leoschut, 2012). Consequently, private high schools in South Africa operate within a challenging terrain, where every decision is intricately linked to financial viability and the preservation of educational excellence. In navigating the delicate balance of this, private schools not only contend with budgetary considerations but also face challenges that extend to the wellbeing of their educators.

Additionally, there are various other challenges that private and public school educators face such as abuse. School educators fall victim to verbal abuse (52.1%), physical violence (12.4%) and sexual violence (3.3%) perpetrated by learners (Burton and Leoschut, 2012). As a result of all these systematic challenges, educators resign from their roles, leading to staff shortages and higher workloads for the remaining staff (Peltzer et al., 2005; Burton and Leoschut, 2012). Thus, it can be deduced that there is a knowledge gap, and that future research is required to explore educators' wellbeing in all school settings. This study setting is within the context of schools that are better functioning within the South African context. Therefore, this study will explore more work-related issues when systems are running "fairly well" - such as those in private secondary schools – and where basic educational and teaching needs are being met, and lack of resources and infrastructure are not a problem. Educators in independent schools have unique demands placed on them, thus making it very difficult to maintain a work-home balance (Grimmer et al., 2021). The demanding nature of their roles, combined with the expectations to participate in various school-related initiatives, can contribute to a challenging work-life balance, affecting both their personal and professional spheres of life (du Preez, 2010). In navigating the intricate demands of their roles, independent school educators find also themselves struggling

with the unique health challenges in South Africa.

South Africa's distinct health challenges, characterised by the quadruple burden of disease and the growing prevalence of chronic diseases among private high school educators, present a high layer of risks and an increased demand for employee wellness programmes for these professionals (Grimmer et al., 2021). Beyond compromising private educators' health, these challenges may lead to long-term chronic conditions, withdrawal from the workforce, and premature mortality (Rasmussen, 2017). Absenteeism, presenteeism (where employees are at work but not fully functioning due to illness or other medical conditions), and diminished productivity directly contribute to organisational underperformance (du Preez, 2010; Zhang et al., 2017; Bryan and Lynch, 2018; Kocakulah et al., 2018). Given that private high school educators spend a significant portion of their day at work, they are particularly vulnerable to stressors that can compromise both their health and overall wellbeing (Rahmani et al., 2017; Agyapong et al., 2022; Tsubono and Mitoku, 2023).

Wellness programmes include screening activities, lifestyle management interventions, health promotion activities, physical fitness, stress management, nutrition, and lifestyle behaviours or activities (Dlamini, 2015; Maletzky and Mahembe, 2017; Ernawati et al., 2022). As a result, many organisations have utilised these programmes to enhance employee productivity and efficiency, and in turn, this has decreased absenteeism levels, reduced presenteeism, and increased overall performance (Bryman and Belle, 2011 in Dlamini, 2015). This is because wellness is not simply the act of being physically fit but has varying dimensions of optimal health, including spiritual, emotional, social, and intellectual (Pelletier, 2015).

Satisfactory wellness programmes must take a holistic approach and include components such as fitness, nutrition counselling discourses on purpose in life, well-thought-out financial planning, social connections and support systems, stress management, mind-body health, career planning and continuing education (Pelletier, 2015). The success of EWP depends on various factors, including the rationale on which it is based, utilisation, and evaluation of the implemented programme within the organisation (Sieberhagen et al., 2011; Khadka and Maharjan, 2017; Maletzky, 2017; Moir, 2018; Albert et al., 2020). There are demographic factors such as age, sex, number of years employed and the level of education an employee has obtained,

which may influence educators' perception, knowledge, and attitudes towards employee wellness programmes (Baloshi and Beuheji, 2018) and an understanding of these can help to design appropriate interventions.

An anonymous web-based questionnaire study demonstrated that an individual's age influences lifestyle and wellbeing index (Lucini et al., 2023). Younger employees (of both sexes) presented the worst lifestyle index (which was quantified by a Lifestyle Index rating from zero to 100 – with higher scores being healthier), particularly in the stress component (Lucini et al., 2023). The common perception of employee wellness programmes by younger employees is influenced by the fact that they are generally healthier than older employees (Yeves et al., 2019; de la Fuente-Nunez et al., 2019; Lucini et al., 2023). Additionally, in a study exploring whether demographic factors (age, gender, education, ethnicity, experience, and position) affected employees' perception and participation in wellbeing programmes, the results found that the likelihood of employees partaking in a wellness programme decreases with the increase in age, resulting in younger employees participating in wellness activities (Baloshi and Buheji, 2018). There was a positive relationship between the level of education and employees' perceptions of wellness programmes (Baloshi and Buheji, 2018).

However, despite how well-documented the causes, consequences, and possible interventions for wellbeing are among teachers, the high prevalence of psychological stress and lack of health and wellbeing remains a pervasive problem (Vazi et al., 2013). Additionally, recent evidence has shown that strategically organised, well-designed, and cautiously assessed programmes have increased employee productivity levels and employee performance levels for organisations, which has further led to the increase in the interest and support of EWP (Mattke et al., 2013, Smith et al., 2020; Zhenjing et al., 2022). Thus, the success of these programmes largely depends on employees' attitudes and perceptions towards them (Huang et al., 2017). Educators have one of the most stressful professions; if not mitigated or treated, chronic work stress may result in burnout (Vazi et al., 2013). Unfortunately, little has been done to investigate South African educators' perceptions, knowledge, and attitudes towards EWP. While the effectiveness of EWP has been widely researched in the corporate sector, to date, little is known about educators'

perceptions, knowledge, and attitudes towards these programmes, particularly in high schools in the private sector of South Africa.

Understanding these views towards wellness programmes may enable future researchers and wellness programme designers to propose and implement effective and well-understood programmes adequately. This may decrease the increasing prevalence of growing diseases in South Africa and further mitigate the risks associated with the quadruple burden of disease contributed by both living and work environments. Additionally, the findings from this study will be used to propose a normative holistic employee wellness programme (HEWP) specifically designed for private high school educators. The purpose of this normative model is to provide future wellness programme designers with the specific challenges that private high school educators face in South Africa. This will ensure that wellness programmes are specifically designed and tailored to the needs of these educators. The wellness programme will therefore assist to decrease the high number of stressors, burnout, health-related challenges, and pressures place on educators which may in turn decrease the high absenteeism and presenteeism levels and high staff turnover within the education sector in South Africa.

1.2 Problem Statement

The topic of employee wellness within the education sector is an area that has received a disproportionate amount of attention. Despite the increase in poor retention, stress, burnout, and general poor health, addressing and remedying these problems holistically in an increasingly dynamic and ever-changing education system has been challenging. Additionally, research surrounding the work-related health and wellbeing of educators, specifically in South Africa, has shown that burnout, job dissatisfaction, depression, anxiety, a lack of physical health consequences and infections such as HIV and AIDS, TB and Malaria are prominent among educators.

Acknowledging all of this, the Department of Education faces increasing challenges of a high disease burden, work-related illnesses and inadequate human resources. Research investigating private high school educators' perceptions, knowledge, and attitudes regarding EWP in South Africa is limited. Furthermore, how demographic factors (such as age, sex, level of education, and years employed as an educator)

may influence the perception, knowledge, and attitude of educators in South Africa is an area that has not been explored. It is crucial to the future of sustainable, progressive, and long-term careers for educators within South Africa to investigate their perceptions, knowledge, and attitudes towards EWP. Therefore, the problem addressed in this study was to investigate the perceptions, knowledge, and attitudes towards EWP among private high school educators in South Africa.

1.3 Research Question, Aim and Objectives of the study:

1.3.1 Aim

To determine the perceptions, knowledge, and attitudes towards EWP among private high school educators in South Africa. Using this data, this study aims to propose a holistic normative model for future EWP tailored for educators in the private high school sector in South Africa.

1.3.2 Objectives

The specific objectives of this study are:

1. To explore whether age, sex, education, and years employed as an educator will significantly impact South African private high school educators' perceptions of employee wellness programmes.
2. To explore whether age, sex, education, and years employed as an educator will significantly impact South African private high school educators' attitudes toward employee wellness programmes.
3. To explore whether age, sex, education, and years employed as an educator will significantly impact South African private high school educators' knowledge of employee wellness programmes.
4. To propose a normative holistic employee wellbeing programme tailored for private high school educators in South Africa.

1.4 Research Hypotheses

The research hypotheses of this study are:

1. The age, sex, education, and years employed as an educator will significantly impact educators' perceptions towards EWP.
2. The age, sex, education, and years employed will significantly impact educators' knowledge of EWP.
3. The age, sex, education, and years employed as an educator will significantly impact educators' attitudes towards EWP.

1.5 Significance of the Study

Within the intricate tapestry of South Africa's private education system, this study investigates educators' perceptions, knowledge, and attitudes towards EWP. Private schools face distinctive challenges when navigating financial constraints, competition for enrolment, and the delicate balance between sustainability and educational quality. Amidst the broader socio-economic disparities of the South African context, public schools often prioritise immediate concerns like teacher salaries and facility maintenance, potentially sidelining the holistic wellbeing of educators. In this dynamic environment, this study aims to bridge a gap by offering insights into the unique challenges faced by private high school educators and exploring the potential design of wellness programmes in addressing these challenges. Recognising the realism of South Africa's educational landscape, where resource allocations differ between public and private sectors, the findings anticipate contributing to the broader discourse on educator wellbeing.

What is unique about this research is the emergence of unpacking wellbeing into the educators' context and further drawing from the many aspects that are relevant to these individuals. Investigating educators' perceptions, knowledge and attitudes towards EWP may offer solutions and recommendations for solving protuberant difficulties that secondary educators in the private education system face and experience. This could promote effective recommendations and lasting employee-health-related changes within major public-facing organisations in South Africa. These changes may lead to meaningful, long-term, holistic, and systematic health and wellbeing initiatives for teachers in schools across South Africa. This study will develop

a holistic normative EWP model specific to educators in the private sector. This will further contribute to bridging the gap within the wellbeing literature. Having identified these problems, the researcher finds the importance of investigating the perceptions, knowledge, and attitudes that educators in the South African education system may have towards programmes that improve employee health and wellbeing.

CHAPTER 2 | REVIEW OF LITERATURE

2.1 Introduction and Background

Technological development, innovation, and economic investments have been the default methods for resolving issues and problems within private and public sector businesses and organisations (Black, 2009). The default methods to resolve these issues in the educational sector include technology integration and various teaching methods to drive economic, social, political, and educational reforms (Jhurree, 2015). In the past, managers and leaders have considered wellbeing an abstract concept and an intangible feature outside the remediable reach of human experience; therefore, wellbeing has been consistently overlooked (Goral, 2010; Cox et al., 2018; Kaur and Singh, 2019). Despite this, it is crucial for organisations to continually improve their performance so that companies remain ahead of their competitors (du Preez, 2010). Consequently, companies cannot afford additional and unnecessary expenses or lack of productivity from their staff members.

Additionally, the workplace is globally a significant setting to promote lifestyle and behavioural changes and promote health and wellness, as approximately 143 million adults are working full-time and spend at least eight to 10 hours per day at the workplace (Badul and Subban, 2022). Absenteeism, presenteeism and a lack of productivity directly affect an organisation's performance (du Preez, 2010; Zhang et al., 2017; Bryan and Lynch, 2018; Kocakulah et al., 2018). For example, if multiple employees take sick leave at the same time due to poor health, this results in higher workloads for the remaining employees. As a result, many employees need help to complete given tasks, thus negatively impacting performance. Companies must equip their staff with the necessary tools to deal with the ever-changing working world, both physically and mentally (Rasmussen, 2017).

Studies have shown that a healthier and happier workforce produces resilience among employees (Seppala and Cameron, 2015; Rahmani et al., 2017; Adams, 2019; Grimmer et al., 2021; Pradhan et al., 2021). In developing and developed countries, with South Africa classified as an upper-middle-income country, adult populations are facing increases in the rates of chronic diseases such as cardiovascular disease, cancers, diabetes, and respiratory disease, which account for 77% of all deaths (World

Health Organisation, 2023). South Africa's complex and unique health challenges are characterised by poor social determinants of health and a quadruple burden of disease (Grimmer et al., 2021). These diseases disable employees' health and productivity, which may lead to long-term chronic conditions, withdrawal from the workforce, diminished family resources, and early death (Rasmussen, 2017). Statistics in South Africa have revealed that the primary causes of death in this nation are Tuberculosis (TB) (8.8% of total deaths), influenza and pneumonia (5.2%), Human Immunodeficiency Virus (HIV) (5.1%), cerebrovascular disease (4.9%), diabetes mellitus (4.8%), other forms of heart disease (4.6%), and hypertensive disease (3.7%) (WHO, 2023). Additionally, these causes of death, along with other factors, such as burnout, job dissatisfaction, depression, and anxiety, are prominent among South African educators (Pons and Daele, 2016). This further highlights the importance and emphasis needed to explore wellness programmes in South Africa. Furthermore, employee wellness programmes (EWP) in South Africa should emphasise the burden of disease by addressing the risks associated with them.

High school educators spend a significant amount of time at work and are exposed to various stressors that can affect their overall health and wellbeing (Rahmani et al., 2017; Agyapong et al., 2022; Tsubono and Mitoku, 2023). Additionally, with a much more challenging and dynamic educational landscape, recruiting and retaining quality educators and implementing sustainable working practices are crucial for managing good schools and ensuring wellbeing (Ekwulugo, 2015). Employee wellness programmes are designed to promote the health and wellbeing of employees. These programmes offer various services such as health screenings, fitness classes, mental health counselling, and stress management programmes (Chen et al., 2019). The main goal of these programmes is to reduce healthcare costs, increase employee productivity, and improve employee satisfaction (Chen et al., 2019). Educators are exposed to various stressors in their workplace, such as heavy workloads and time pressure (Skaalvik and Skaalvik, 2018; Jimenez, 2021; Agyapong et al., 2022; Arbia et al., 2023). Research has shown that EWP can reduce absenteeism, presenteeism, increase job satisfaction, and improve productivity (du Preez, 2010; Maletzky and Mahembe, 2017; Skaalvik and Skaalvik, 2018; Abdullah and Lee, 2021; Huang et al., 2017; Marrin-Farrona et al., 2023).

Understanding employees' attitudes and perceptions towards EWP are crucial for the success of these programmes (Rees and Breen, 2017) and are an important first research step. Research has shown that employees with positive attitudes towards wellness programmes are likelier to participate in wellness programmes focusing on overall wellbeing and employee wellbeing (Rees and Breen, 2017; Passey et al., 2018; Edwards and Marcus, 2018; Jones et al., 2019). Despite abundant research examining the significance of wellness programmes, limited research focuses on understanding the different perceptions, knowledge, and attitudes of these programmes in the South African context. Employees who perceive wellness programmes as beneficial are more likely to engage in healthy behaviours and adopt a healthy lifestyle (Chen et al., 2019). The significance of wellness programmes in promoting healthy behaviours among employees underscores the need for a deeper understanding of the South African health context.

2.2 Quadruple Burden of Disease in South Africa

South Africa has a complex and formidable health challenge known as the quadruple burden of disease. This multifaceted phenomenon encompasses a diverse array of health conditions, which includes communicable diseases such as the HIV and AIDS epidemic, high levels of TB, high maternal and child mortality, and a growing burden of NCDs (Maphumulo and Bhengu, 2019).

2.2.1 Communicable Diseases

Communicable diseases, including HIV/AIDS, TB, malaria, and other infectious diseases, have long been a significant public health concern in South Africa (Maphumulo and Bhengu, 2019). Despite significant progress in combating HIV/AIDS and TB in recent years, these diseases continue to exert a substantial toll on the population, particularly in terms of morbidity and mortality (Maphumulo and Bhengu, 2019). According to recent statistics, South Africa remains one of the country's most heavily affected by the HIV/AIDS epidemic, with an estimated 7.8 million people living with HIV in 2020 (UNAIDS, 2021). Similarly, TB remains a leading cause of morbidity and mortality, with an estimated 360 000 cases reported in 2020 (World Health Organization [WHO], 2021).

2.2.2 Non-Communicable Diseases (NCDs):

Non-communicable diseases, including cardiovascular diseases, cancer, diabetes, and respiratory diseases, have emerged as a growing health threat in South Africa (WHO, 2022). This is largely due to lifestyle factors such as tobacco use, unhealthy diets, physical inactivity, and alcohol consumption (WHO, 2022). Recent statistics indicate a rising prevalence of NCDs in the country, with cardiovascular diseases and diabetes posing particularly significant challenges (WHO, 2022). According to the South African National Health and Nutrition Examination Survey (SANHANES) in 2020, approximately 28% of adults in South Africa had hypertension, a significant risk factor for cardiovascular diseases (Shisana et al., 2021). Additionally, diabetes prevalence has increased steadily, with an estimated 5.6 million adults living with diabetes in 2020 (International Diabetes Federation [IDF], 2021).

2.2.3 Injury and Violence

Injury and violence represent another critical component of the quadruple burden of disease in South Africa, contributing to significant morbidity, mortality, and social disruption (Achoki et al., 2022). Road traffic accidents, interpersonal violence, and self-harm are among the leading causes of injury-related deaths and disabilities in the country (Achoki et al., 2022). Recent data from the South African Medical Research Council (SAMRC) indicates that interpersonal violence, including homicide and assault, accounted for over 9 000 deaths in 2020 (SAMRC, 2021). Similarly, road traffic injuries remain a significant public health concern, with an estimated 20 000 deaths reported in 2020 (SAMRC, 2021).

2.2.4 Maternal and Child Health

Maternal and child health issues, including maternal mortality, neonatal mortality, and childhood malnutrition, constitute the fourth component of the quadruple burden of disease in South Africa (Achoki et al., 2022). Despite improvements in maternal and child health indicators in recent years, disparities persist, particularly in underserved and marginalised communities (Achoki et al., 2022). South Africa's maternal mortality ratio stood at 119 deaths per 100 000 live births in 2020, with neonatal mortality remaining a significant challenge (Statistics South Africa, 2021).

2.2.5 Implications of Quadruple Burden of Disease in South Africa

Africa faces the daunting task of managing numerous health challenges, marked by elevated levels of infectious diseases like HIV, AIDS, and tuberculosis, as well as non-communicable ailments such as cardiovascular diseases and diabetes (Achoki et al., 2022). This complex healthcare landscape is particularly pronounced in South Africa, where the nation grapples with what is termed a quadruple burden of disease. The financial costs incurred due to absenteeism, presenteeism, and early retirement due to ill health significantly burden the country's GDP (Achoki et al., 2022). The impact of NCDs on the workforce emerges as a critical concern, with conditions like HIV/AIDS affecting the ability of employees to work optimally. The decline in the young South African working-age population, largely attributed to the burden of diseases like AIDS, has substantial implications for the labour force, potentially resulting in a considerable reduction in the GDP (Rasmussen, 2017).

Despite South Africa's youthful population, the high prevalence of NCDs and communicable diseases poses challenges to workforce productivity (Puoane et al., 2013; Maphumulo and Bhengum, 2019; Malakoane et al., 2020; Yuyun et al., 2020). The economic costs associated with absenteeism, presenteeism, and early retirement highlight the urgent need for effective EWP to mitigate these impacts (Rasmussen, 2017; Nagata et al., 2018). Furthermore, the prevalence of the NCDs and communicable diseases globally underscores their significant economic impact, particularly within the workforce (Chaker et al., 2015; Rasmussen, 2017; Nagata et al., 2018). Various studies have demonstrated the substantial productivity losses and economic burdens associated with diseases such as cancer, diabetes, cardiovascular diseases, and chronic obstructive pulmonary disease (COPD) (Chaker et al., 2015). The economic impact is evident regarding disability-adjusted life years (DALY), absenteeism, presenteeism, and labour market non-participation (Chaker et al., 2015).

In South Africa, the escalating mortality rates due to NCDs, particularly cardiovascular diseases (CVD), cancer, diabetes, and chronic lower respiratory diseases, pose significant challenges, Figure 1 (Chaker et al., 2015; Statistics South Africa, 2021). The geographical distribution of NCD-related deaths varies across provinces, raising questions about access to health services and the quality of services provided (Statistics South Africa, 2021). For instance, there has been a 58.7% increase in

deaths due to significant NCDs over the last 20 years, Figure 1, with males exhibiting higher Age Standardized Mortality Rates (ASMR) than females (Chaker et al., 2015). The highest ASMR is observed for CVD, followed by cancer, diabetes, and chronic lower respiratory diseases (Chaker et al., 2015). Chronic Obstructive Pulmonary Disease accounted for 62%, followed by Asthma at 22.3% of causes of mortality in 2018 (Statistics South Africa, 2021). These leading respiratory diseases accounted for almost 90% of all deaths due to chronic lower respiratory infections (Statistics South Africa, 2021).

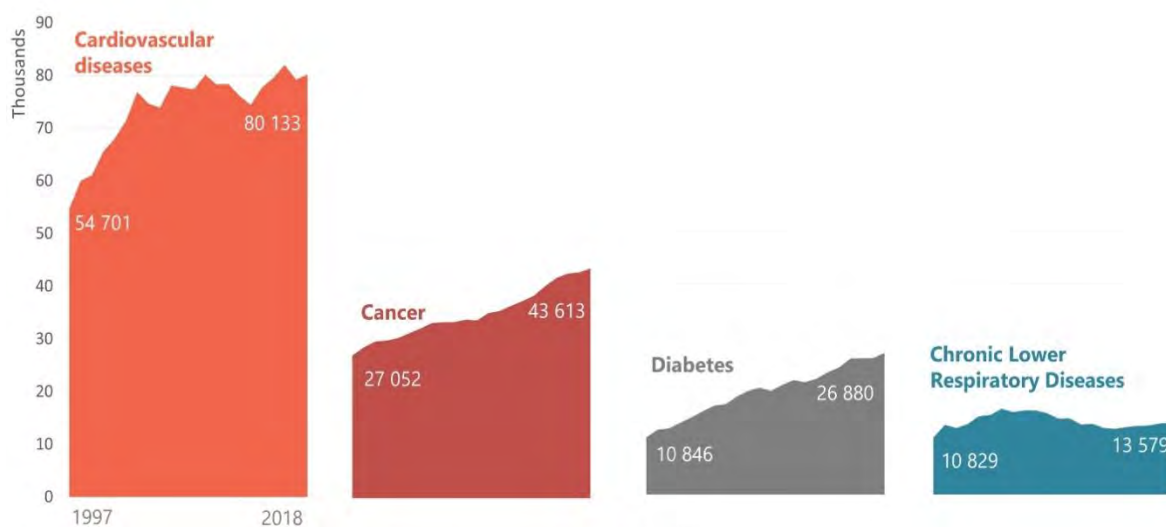


Figure 1: Deaths due to NCDs over 20 years: 1997 – 2018, extracted from Statistics South Africa (2021).

Between 2008 and 2018, chronic lower respiratory diseases made up 2.4% of all deaths in 2008, rising to 3% in 2018, Figure 2 (Statistics South Africa, 2021). Most of these were chronic obstructive pulmonary diseases (COPD), followed by asthma and status asthmaticus (Statistics South Africa, 2021). Nearly 90% of deaths from chronic lower respiratory diseases were due to these three conditions, with more deaths among males (Statistics South Africa, 2019). For people with diabetes, the number of deaths increased by 36.5% during this time (Statistics South Africa, 2021). In 2018, the mortality rate for diabetes was 62.86 deaths per 100,000 people (Statistics South Africa, 2021). Indian/Asian rates were highest but decreasing, while White rates were lowest and steady, Figure 2 (Statistics South Africa, 2019). Coloured and Black African rates were lower but rising compared to Indian/Asian rates, Figure 2 (Statistics South Africa, 2021). Deaths from CVD have gone up steadily, from 12.9% to 17.6%, Figure

2 (Statistics South Africa, 2019). Black Africans had the highest rates of deaths from CVD, followed by Indian/Asian and Coloured groups, while the White population had the lowest rates, Figure 2 (Statistics South Africa, 2021).

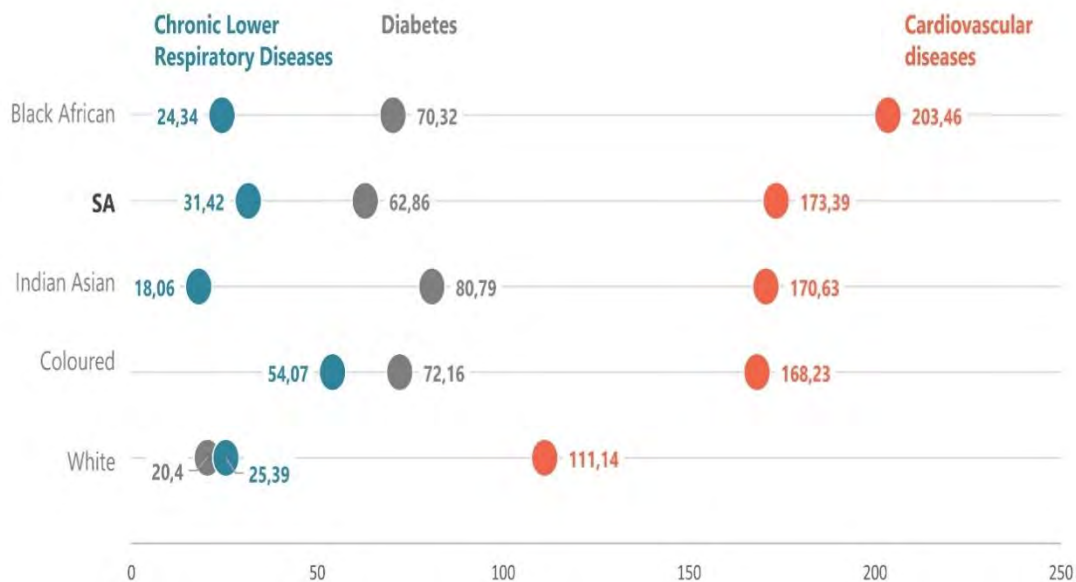


Figure 2: ASMR by population group due to major NCDs in 2018 extracted from Statistics South Africa (2019).

Regarding the burden of NCDs and mortality rates, KwaZulu-Natal, Gauteng, Western Cape, and Eastern Cape provinces have some of the highest deaths due to NCDs, possibly reflecting their large populations (Chaker et al., 2015). However, their age-standardized mortality rates vary, suggesting differences in access to health services or the quality of services (Chaker et al., 2015). Free State has one of the lowest numbers of NCD-related deaths in absolute numbers but some of the highest mortality rates (Chaker et al., 2015). Regarding diabetes, South Africa faces an increased risk of absenteeism, presenteeism, and an inability to work, resulting in lost productivity days per year, ranging from 3.6 to 7.3 (Chaker et al., 2015). The impact of diabetes on South Africa's workforce is significant, accounting for an estimated 162,877 annual DALY (Chaker et al., 2015). Additionally, the South African workforce loses an estimated 7.2 days yearly due to diabetes (Chaker et al., 2015).

On the other hand, communicable diseases present multifaceted implications for South Africa across various spheres (Achoki, 2022). There are approximately 6.1 million South Africans who are currently living with HIV (Von Zinkernagel, 2017). South Africa stands among the nations facing a high burden of TB, including drug-resistant strains and cases co-infected with HIV, on a global scale (National Institute for Communicable Diseases [NICD], 2022). Notably, TB mortality rates surged significantly alongside the expanding HIV epidemic, rising from 163 per 100 000 in 1986 to 628 per 100 000 in 2006, Figure 3 (Karim, 2009 in Statistics South Africa, 2023). However, a notable shift occurred thereafter, with TB-related mortality exhibiting a marked decline post-2006, Figure 3 (Statistics South Africa, 2023).

This decline coincided with pivotal developments such as the nationwide rollout of Antiretroviral Therapy (ARVs) in 2006, Figure 3, and the adoption of integrated management strategies for TB and HIV endorsed by the WHO guidelines (NICD, 2022). These guidelines advocated for intensified TB case detection, provision of TB preventive therapy such as isoniazid preventive therapy (IPT) for individuals living with HIV, routine HIV testing for TB patients, and the administration of cotrimoxazole preventive therapy (CPT) for TB patients co-infected with HIV (WHO, 1998; National Department of Health [NDoH], 2012 in Statistics South Africa, 2023). Notably, research conducted in a high HIV incidence area of South Africa demonstrated a significant reduction in TB risk among HIV-infected adults following IPT administration and the initiation of highly active antiretroviral therapy (HAART) (Golub et al., 2009 in Statistics South Africa, 2023).

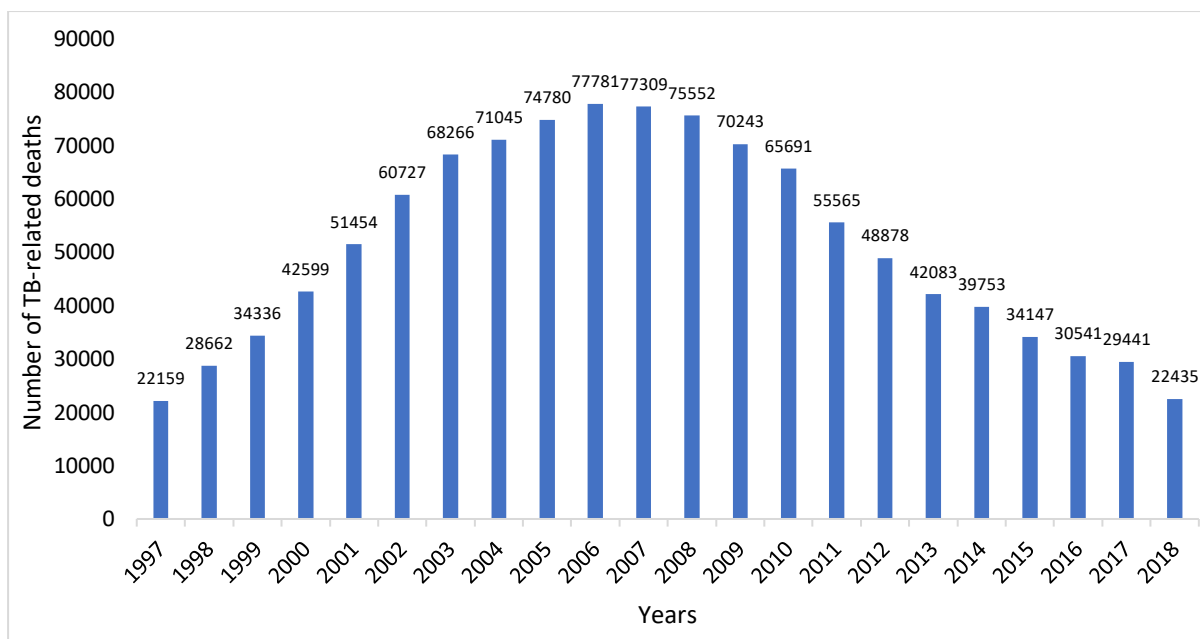


Figure 3: Deaths related to TB between 1997 - 2018 in South Africa – extracted from Statistics South Africa (2023).

The prevalence of communicable diseases places considerable strain on South Africa's healthcare infrastructure and resources (Maphumulo and Bhengu, 2019). Hospitals and clinics face increased demands for diagnosis, treatment, and management of infectious illnesses, often stretching their capacity to deliver timely and effective care (Maphumulo and Bhengu, 2019). This strain on healthcare facilities can lead to longer wait times, overcrowding, and limited access to essential services for both communicable and non-communicable diseases (Maphumulo and Bhengu, 2019). Communicable diseases contribute significantly to morbidity and mortality rates in South Africa (Boutayeb, 2010; Achoki et al., 2022). Particularly, among vulnerable populations such as children, the elderly, and individuals with pre-existing health conditions (Achoki et al., 2022). Diseases like COVID-19, HIV/AIDS, TB, malaria, and vaccine-preventable illnesses continue to exact a heavy toll on public health (Achoki et al., 2022). This leads to reduced life expectancy (LE) and diminished quality of life for affected individuals and communities (Achoki et al., 2022).

The burden of communicable diseases exacts a substantial economic toll on South Africa, both at the individual and societal levels (Boutayeb, 2010). Direct costs include expenses related to medical treatment, hospitalisation, and pharmaceuticals (Boutayeb, 2010). These costs place financial strain on households and healthcare

systems alike (Bouyateb, 2010). Indirect costs stem from productivity losses due to illness, disability, and premature death, hindering economic growth and development efforts (Bouyateb, 2010). Communicable diseases exacerbate existing social inequalities within South African society, disproportionately affecting marginalised and disadvantaged communities (Mukumbang et al., 2020). Factors such as poverty, inadequate housing, limited access to healthcare, and educational disparities contribute to higher rates of transmission and poorer health outcomes among vulnerable populations (Mukumbang et al., 2020). Addressing these social determinants of health is crucial for reducing the burden of communicable diseases and promoting health equity (Mukumbang et al., 2020).

The presence of communicable diseases poses a significant threat to public health security, both domestically and globally (Tulchinsky and Varavikova, 2014). Outbreaks of infectious illnesses, such as Ebola, Zika virus, and pandemic influenza, have the potential to spread rapidly within communities and across borders if not effectively controlled (Tulchinsky and Varavikova, 2014). Communicable diseases can lead to debilitating symptoms, prolonged illness, and compromised immune systems, resulting in increased absenteeism and decreased work efficiency (Tulchinsky and Varavikova, 2014). Employees struggling with these conditions may find it challenging to fulfil their job responsibilities (Tulchinsky and Varavikova, 2014). This leads to disruptions in workflow and productivity loss for businesses and organisations (Tulchinsky and Varavikova, 2014). From an economic perspective, the financial burden associated with treating and managing communicable diseases can be substantial for both employers and employees (Kankeu et al., 2013). Healthcare expenses, including medication costs, hospitalisation fees, and medical consultations, can impose financial strain on individuals and families (Kankeu et al., 2013). The costs are particularly directed to those with limited resources or inadequate health insurance coverage (Kankeu et al., 2013). For employers, providing comprehensive healthcare benefits and support programmes for employees battling communicable diseases may entail additional expenses, impacting their bottom line and overall financial stability (Kankeu et al., 2013).

Moreover, strong surveillance systems, rapid response mechanisms, and international cooperation are essential for detecting, containing, and mitigating the impact of emerging infectious threats (Tulchinsky and Varavikova, 2014). Considering these multifaceted implications, addressing the burden of communicable diseases in South Africa requires a comprehensive and integrated approach (Tulchinsky and Varavikova, 2014). This includes strengthening healthcare systems, expanding access to essential services, promoting preventive measures such as vaccination and sanitation, addressing social determinants of health, and fostering international collaboration to combat global health threats (Tulchinsky and Varavikova, 2014). By addressing the root causes and consequences of communicable diseases, South Africa can work towards improving population health, reducing inequalities, and enhancing public health security for all its citizens (Tulchinsky and Varavikova, 2014). Moreover, the significant quadruple burden of disease in provinces like KwaZulu-Natal, Gauteng, Western Cape, and Eastern Cape highlights the pressing need for attention to employee wellness, especially among educators, whose profession is already recognised as one of the most stressful occupations (Curtis, 2009; Schonfield et al., 2017).

2.3 COVID-19 in South Africa

The novel coronavirus 2019 (COVID-19) was first identified in Wuhan, Hubei Province, China, in December 2019 (Hengo et al., 2020; Tanu, 2020). South Africa reported its first confirmed COVID-19 case in March 2020 (Nsomba et al., 2021). Following this initial case, South Africa swiftly implemented stringent policies to control the virus's spread (Fisher et al., 2022). By 15 March, a national state of disaster was declared, which included a travel ban, social distancing measures, and the closure of educational institutions (Fisher et al., 2022). Eight days later, President Ramaphosa announced a nationwide lockdown starting on 26th of March, requiring everyone except essential workers to stay at home, with exceptions only for accessing healthcare or purchasing essential items (Fisher et al., 2022).

To manage the gradual lifting of the lockdown, South Africa introduced a five-level COVID-19 alert system (Nsomba et al., 2021). The alert levels determined the restrictions to be applied during the national state of disaster (Nsomba et al., 2021). This risk-adjusted approach was based on several criteria, including infection levels

and transmission rates, healthcare system capacity, public health intervention implementation, and the economic and social impacts of ongoing restrictions (Nsomba et al., 2021). The alert levels were defined as follows:

- Alert Level 1: Low COVID-19 spread with high health system readiness.
- Alert Level 2: Moderate COVID-19 spread with high health system readiness.
- Alert Level 3: Moderate COVID-19 spread with moderate health system readiness.
- Alert Level 4: Moderate to high COVID-19 spread with low to moderate health system readiness.
- Alert Level 5: High COVID-19 spread with low health system readiness (Fisher et al., 2022).

The COVID-19 pandemic triggered a severe global economic downturn, with substantial socio-economic impacts worldwide (United Nations Development Program (UNDP) in South Africa, 2020). The initial wave of the pandemic forced South Africa into a nationwide lockdown, which had a devastating effect on the economy, businesses, and the livelihoods of South Africans (Nsomba et al., 2021). The country's economy was estimated to have contracted by at least 8% in 2020, with the unemployment rate reaching a record high of 32.5% in the fourth quarter of 2020, and youth unemployment hitting 63.2% (Stats SA, 2021). The pandemic compounded existing economic challenges, including slow economic growth, consecutive quarters of recession, low investment levels, and multiple credit rating downgrades (Nsomba et al., 2021). Consequently, COVID-19 deepened South Africa's pre-existing economic crisis.

Socially, the pandemic worsened existing inequalities and introduced new challenges. Education was severely disrupted as schools closed and shifted to remote learning (Wills and van der Berg, 2022). However, the digital divide meant that many students, particularly those from disadvantaged backgrounds, had limited access to necessary technology and internet connectivity (Wills and van der Berg, 2022).. This exacerbated educational inequalities and is likely to have long-term effects on the country's human capital development (Wills and van der Berg, 2022). Mental health issues also surged during the pandemic, with increased reports of anxiety, depression, and substance abuse (Wills and van der Berg, 2022). The prolonged lockdowns and economic

hardships strained social cohesion, leading to a rise in domestic violence and social unrest (Wills and van der Berg, 2022).

By mid-2024, South Africa had reported 4,076,463 positive COVID-19 cases and 102,595 deaths, Figure 4 (Worldometer, 2024). The pandemic has left a lasting impact on South Africa, underscoring the need for resilient healthcare systems, economic reforms, and social equity to better withstand future crises (Fischer et al., 2022). Moving forward, South Africa faces the challenge of not only recovering from the immediate impacts of the pandemic but also addressing the underlying issues brought to light. Building a more resilient and equitable society will require sustained efforts and structural reforms across multiple sectors

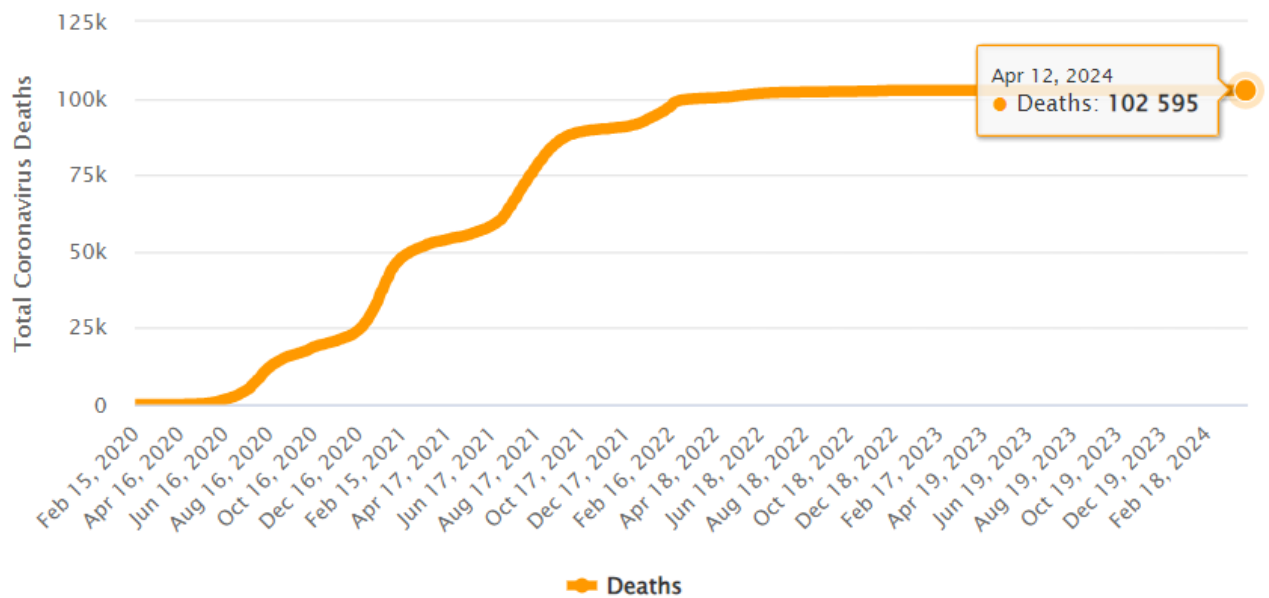


Figure 4: Total COVID-19 deaths in South Africa - extracted from Worldometer, 2024.

During the Mid-year Population Estimates (MYPE) period from July 2020 to June 2021, South Africa experienced peaks in deaths during both the first and second waves of the COVID-19 pandemic (Stats SA, 2021). This led to a significant increase in the crude death rate (CDR), rising from 8.7 deaths per 1,000 people in 2020 to 11.6 deaths per 1,000 people in 2021, representing a 34% increase (Stats SA, 2021). Consequently, there was a noticeable decline in the 2021 LE at birth for South Africa (Stats SA, 2021). Life expectancy at birth for males dropped from 62.4 years in 2020 to 59.3 years in 2021, a decrease of 3.1 years, while for females it declined from 68.4

years in 2020 to 64.6 years in 2021, a decrease of 3.8 years, Figure 5 (Stats SA, 2021). Although LE at birth is a crucial health indicator, during the COVID-19 period, it should not be interpreted as an individual's projected lifespan (Stats SA, 2021). Instead, it should be used to illustrate the cumulative burden of the crisis compared to recent trends (Stats SA, 2021).

The dramatic increase in deaths and the subsequent drop in LE reflect the severe impact of the pandemic on South Africa's population (Stats SA, 2021). The country's health system was already under strain due to high rates of HIV/AIDS and tuberculosis, and the added burden of COVID-19 further exacerbated the challenges faced by healthcare providers. The data underscores the need for comprehensive health and social interventions to address the short- and long-term effects of the pandemic on South Africa's population.

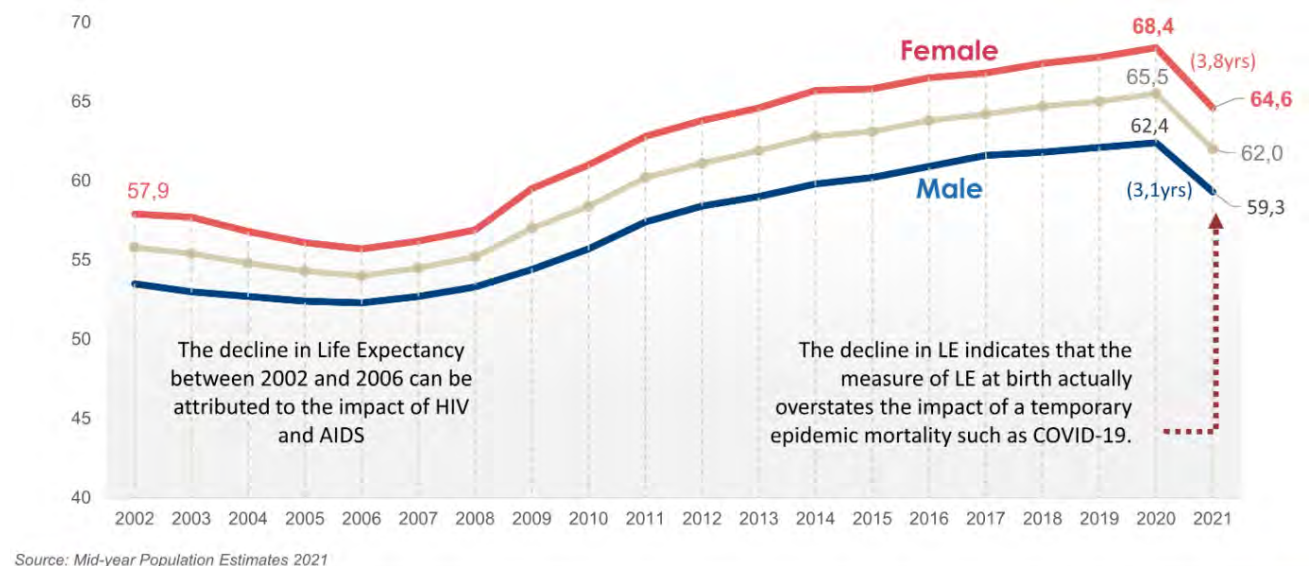


Figure 5: Total LE at birth by sex overtime - extracted from Stats SA, 2021.

2.4 The Education System

John Illingworth, former President of the National Union of Teachers, stated that teaching is the most stressful job (Curtis, 2009; Schonfield et al., 2017 in Agyapong, 2022; Corrente et al., 2022; Barnes and Lang, 2023; Fang et al., 2023). Illingworth further noted that one in three educators suffer from mental health-related issues at some point during their teaching career (Curtis, 2009). Additionally, it was reported

that one in three educators take sick leave because of work-related stress (Teacher Health, 2011). Between 2008 and 2009, there was an 80% increase in the number of educators committing suicide, which is 30 – 40 % higher than the national average for other professions (Schonfield et al., 2017). Education is an integral component of societies and the individuals that reside in them (Idris et al., 2012; Legotlo, 2014).

However, the quality of education can easily be compromised by factors such as lack of infrastructure, instructional materials - such as textbooks - and strong management and leadership structures (Legotlo, 2014). Additionally, Quan-Baffour and Arko-Achemfour (2013) have made the comparison that education is an essential tool compared to a society's natural resources. An educated community is further believed to be prosperous as a nation, and society's success highly depends on how educated the population is (Idris et al., 2012; Berger and Fisher, 2013; Kromydas, 2017). Therefore, when considering this ideology, more attention to employee wellbeing may be needed to meet teaching and educational standards. This may further compromise the quality of students' education, resulting in low educational attainment and yielding in an impoverished and unsuccessful society.

The Basic Education System of South Africa consists of Pre-primary, Primary and Secondary schools. Pre-primary schools are the foundational phase and have the Pre-Grade R grade for children up to four years of age and Grade R, which is meant for children from five to six years old. Once students have gone through grade R, they will move on to Primary school. The Primary schools run from Grade 1 to Grade 7 (six – 13 years), and Secondary Schools, also called *High Schools*, run from Grade 8 to Grade 12 (13 – 18 years). Once students have gone through the Secondary schooling system, they will proceed to Higher Education and Training or Tertiary Education.

The South African Schools Act (SASA) of 1996 established a national schooling system and recognised two categories: public/government and independent primary and secondary schools. The main difference between these two types of schools is that public schools are governed by the state, whereas independent schools are privately governed (Human Sciences Research Council - HSRC, 2016). In addition, public schools are further divided into a quintile system. This allows the government to distribute resources equally and plan accordingly – determining how much funds a school will receive (HSRC, 2016). This system classifies schools into five categories

from the poorest – quintile one – to the least poor – quintile five. For pragmatic reasons, this research focused on teachers in the private school sector.

2.4.1 *Private Schools: An International Perspective*

Globally, the trend towards entrepreneurs and financial organisations is geared towards providing schooling to the high, middle, and working class (Hofmeyer et al., 2013). It was reported in 2008 that private school enrolment compared to public schools had increased by 113% in Africa (McKay et al., 2018). Draper and Hofmeyer (2015) have argued that previous misconceptions about private schools being elitist, only for the privileged, and that they promote social inequality have been proven to be untrue. These authors have established this misconception by providing the sheer numbers of low-fee private schools (Draper and Hofmeyer, 2015). The low-fee private schools are called *Private Education for the Poor*, or PEP (Draper and Hofmeyer, 2015).

PEP schools specifically cater to the underprivileged, have smaller class sizes (like typical private schools), higher test scores, and are said to have more motivated educators (McKay et al., 2018). Through this initiative, private schools have reduced inequality by enabling underprivileged and poverty-stricken children to access education that would otherwise be denied to them (McKay et al., 2018). Draper and Hofmeyer (2015) have provided two primary reasons private school enrolments are increasing globally. First is the robust and unmet demand for education (Draper and Hofmeyer, 2015). Due to this, most states need more resources and infrastructure to provide public-run schools (Draper and Hofmeyer, 2015). This reasoning is specifically valid for learners deemed “too old” or pupils residing in informal settlements or rural areas (McKay et al., 2018).

Secondly, there are common notions among parents that private schools offer better quality education and provide a better space where their children can be taught within a specific cultural or religious framework (Draper and Hofmeyer, 2015). Interestingly, developed nations are driven by the perception that private education is superior and elitist, compared to developing countries where private education institutions are governed and filled by a supply-demand gap (McKay et al., 2018). From this, one can deduce that private education institutions in developing nations are only sometimes considered better than public schools regarding infrastructure, resources, and

academic performance (McKay et al., 2018). Building on the global perspective of private schools, the South African context provides a unique insight into the evolution and significance of private education within the country's educational landscape.

2.4.2 Private Schools: A South Africa Perspective

South Africa, through the Independent Schools Association of South Africa (ISASA), has stated that “private schools are those that have registered with the relevant authorities, but derive most of their income from non-State sources” (McKay et al., 2018: 2). Comparatively, before 1994, private schools were a lot more expensive than their counterparts which offered free or cheap public education of the time (McKay et al., 2018). Private schools were the first educational institutions to desegregate by passing a resolution at the South African Catholic Bishop’s Conference in 1976 (McKay et al., 2018). There were approximately 220 learners of varying races and ethnical backgrounds that were attending these desegregated institutions that were formerly referred to as “white” Catholic schools by 1977. This number increased to 4700 learners of other races enrolled and housed in 75 Catholic schools (Christie, 1989). There was a rapid trend toward desegregation, and by 2010, 72% of learners enrolled in private schools were Black African (Hofmeyr et al., 2013).

Private institutions, therefore, played a critical role in desegregation and combating the former apartheid regime. Additionally, these institutions have played a vital role in the post-apartheid South Africa education landscape, with a considerable rise in their number and enrolment levels (McKay et al., 2018). A clear depiction of this is when you consider the number of private schools now, compared to how many were pre- and post-apartheid. There were 518 private schools in South Africa in 1994; this increased to 971 in 2000 and 1399 private schools in 2010 (McKay et al., 2018). This depicts an 170% increase in private schools in the country. Since 2010, the National Department of Basic Education (DBE) has documented 513804 pupils enrolled in 1681 private schools in 2013, thus demonstrating a further 20% increase (DBE, Republic of South Africa (RSA), 2015).

However, it has been reported that these numbers may be higher, and many informal, unregistered schools may be omitted in these official statistics (Van der Berg et al., 2016). By 2022, there was 13.4 million learners in South Africa with 95% of learners (12.7 million learners) attending public school and 735085 learners in the independent

schooling sector (Cowling, 2023). Transitioning from examining private schools in South Africa, this next section will address the systemic challenges within the country's education system. It becomes evident that the education landscape encompasses various complexities and nuances that require comprehensive consideration and strategic intervention that will be addressed in the next section.

2.4.3 Addressing Systemic Challenges in South African Education

Research from the 1900s has extensively documented the myriad work-related challenges teachers face (Vazi, 2013). South African educators have reported a significant prevalence of workplace-related stress (Vazi, 2013). However, it is crucial to acknowledge that the challenges confronting the education system in South Africa extend beyond traditional teaching and learning realms (Vazi, 2013). In the context of the global mental and physical health crises facing educators, it is imperative to contextualise these challenges within South Africa's unique socio-economic landscape. Here, systemic issues like institutionalised racism exacerbate disparities in resource allocation, perpetuating inequalities and magnifying the demands placed on educators (Vazi et al., 2013). The education system in South Africa grapples with pervasive challenges, including inadequate resources, poverty, the quadruple burden of disease, and elevated crime rates, which deeply influence the societal fabric (Vazi et al., 2013). These systemic hurdles profoundly impact factors such as educational access, learner wellbeing, and teaching effectiveness (Vazi et al., 2013). Within this context, educators in different institutions face divergent levels of resource allocation, financial support, and staffing, compounding work demands and stress levels (vazi et al., 2013).

Addressing the multifaceted challenges confronting the South African education system necessitates a holistic approach encompassing social, economic, and health interventions (Vazi et al., 2013). While EWP and human resource practices can offer support, comprehensive progress demands concerted efforts to tackle underlying systemic issues perpetuating inequality and hindering educational outcomes (Vazi et al., 2013). Racism, deeply entrenched within the system's historical legacy of apartheid, continues to manifest in discriminatory practices and unequal access to resources (Mampane and Bischoff, 2021; Ramlall and Singh, 2022). Persistent racial

disparities underscore the imperative of addressing systemic racism and fostering equity within schools (Ramlall and Singh, 2022).

Moreover, poverty poses a formidable barrier to educational achievement, exacerbating disparities in outcomes and perpetuating cycles of disadvantage (Mampane and Bisschoff, 2021). High poverty levels restrict learners' access to essential resources, hindering academic progress and wellbeing (Mampane and Bisschoff, 2021). The quadruple burden of disease further compounds these challenges, affecting both educators and learners and necessitating comprehensive health interventions (van Heerden et al., 2023). Beyond formal education, informal work arrangements, such as tutoring or part-time employment, are prevalent among educators, reflecting low salaries and limited career advancement opportunities (Van Heerden et al., 2023).

These informal arrangements can impact educators' wellbeing and job satisfaction, underscoring the need for systemic reforms to enhance working conditions and remuneration (Van Heerden et al., 2023). By addressing systemic issues like racism, poverty, the burden of disease, and informal work arrangements, South Africa can foster a more equitable and inclusive education system that supports the wellbeing and success of all stakeholders. Educators, the cornerstone of the educational process, encounter numerous hurdles that impact their wellbeing, job satisfaction, and ultimately, the quality of education imparted to students (Van Der Berg et al., 2016). The immense pressure placed on educators is evident in high absenteeism rates and low time-on-task levels (Legotlo, 2014). The demanding nature of the teaching profession, compounded by socioeconomic challenges, exposes educators to high levels of stress and mental health issues (De Villiers and Maree, 2017).

Additionally, socioeconomic disparities significantly influence educators' challenges, as they often find themselves in under-resourced schools, where the lack of basic infrastructure and teaching materials hinders effective teaching (Petersen and Molefe, 2018; Van der Berg et al., 2016). These challenges highlight the need for comprehensive support systems and interventions to address educators' wellbeing and job satisfaction. Employee wellness programmes are crucial strategies to enhance educators' overall wellbeing and effectiveness in the classroom (Nel et al., 2017). However, the responsibility for ensuring educator wellbeing remains complex,

involving various stakeholders such as employers, professional teaching communities, and individuals (Ekwulugo, 2015). As South Africa navigates these challenges, a collaborative approach that addresses systemic issues and prioritises educators' wellbeing is essential for building a more equitable and inclusive education system. Transitioning from exploring systemic challenges within the South African education system, it is essential to investigate a historical overview of wellbeing and wellness, tracing these concepts' evolution and significance in contemporary discourse.

2.4.4 Addressing Challenges in Education Systems Post COVID-19: A Global and South African Perspective

In South Africa, all schools were closed nationwide due to the COVID-19 pandemic starting on March 18, 2020 (UNDP, 2020). Schools began a phased reopening at the end of June 2020, with different grades returning at different times (Wills and van der Berg, 2022). In 2020, students lost an average of 54% of their contact learning time due to changes in the school calendar (DBE, 2022). Remote learning opportunities were very limited, with only 6% of youth aged 5–24 participating in remote learning in 2020 (Stats South Africa, 2022). Rotational attendance schedules, which continued for over 18 months after schools reopened in mid-2020, significantly contributed to the loss of contact teaching time (Wills and van der Berg, 2022). In the second half of 2021, 22% of contact time was lost in Grade 3 due to rotations and absenteeism (Wills and van der Berg, 2022). For about one-third of schools implementing rotations, attendance among Grade 3 students was as low as 45% in the third term of 2021 (DBE, 2022). Regular daily school attendance only resumed in February 2022 (Stats South Africa, 2022). Although schools and economic activities have largely returned to normal after the removal of COVID-19 lockdown restrictions, the pandemic's impact on education is ongoing (Wills and van der Berg, 2022).

The two-year disruption of schooling has had significant consequences for children's development (Wills and van der Berg, 2022). Two major reviews in 2022 have considered the global educational impacts of COVID-19 (Patrinos et al., 2022). Patrinos et al. (2022) reviewed 35 robust studies documenting learning losses, although only four of these studies were from low-to-middle-income countries (LMICs) (Patrinos et al., 2022). Out of 35 studies, 32 found evidence of learning loss, with an average learning loss of 0.17 standard deviations, roughly equivalent to half a school

year of learning. Larger losses were evident in LMICs such as Mexico (0.55 SD), Brazil (0.32 SD), and China (0.22 SD) (Patrinos et al., 2022). Moscovitz and Evans (2022) reviewed 40 empirical studies estimating student learning losses or dropout rates across different income levels. They found that even in high-income countries with the capacity for distance learning, students still experienced learning losses (Mascowitz and Evans, 2022). For instance, in the United Kingdom, six studies reported learning losses ranging from 0.05 to 0.17 standard deviations (Moscowitz & Evans, 2022). Long-term data from the United States showed significant learning losses when compared against trends dating back to 1992, with notable declines in fourth-grade reading and mathematics scores nationwide (National Assessment of Educational Progress (NAEP), 2022). A common trend across countries was that the pandemic increased learning inequality (Moscowitz and Evans, 2022; Willis and van der Berg, 2022). Students with lower socioeconomic status experienced greater learning losses, a pattern observed in both low-to-middle-income and high-income countries (Moscowitz and Evans, 2022). Among 20 studies examining learning loss by socioeconomic status, 15 found greater learning losses among lower socioeconomic students (Patrinos et al., 2022). The longer schools remained closed, the greater the learning losses; for every week of closure, learning declined by 0.01 standard deviations on average (Patrinos et al., 2022).

In South Africa, learners faced significantly reduced exposure to school in 2020 and 2021 due to lockdowns and rotational schedules (Willis and van der Berg, 2022). For example, in the Western Cape, an average of 155 school days were lost over these two years (Van der Berg et al., 2022). Performance data from the Western Cape Systemic Tests for Grades 3, 6, and 9 in 2021 showed substantial learning losses compared to 2019, Figure 6 (Van der Berg et al., 2022). Grade 3, 6, and 9 students were found to be 40–70% of a school year behind in language and 95–106% of a school year behind in mathematics, Figure 6 (Van der Berg et al., 2022). Learning losses were particularly severe in mathematics and in primary grades, Figure 6 (Van der Berg et al., 2022). For Grade 3, the loss in mathematics equated to almost a full school year of learning, assuming 190 school days (Van der Berg et al., 2022).

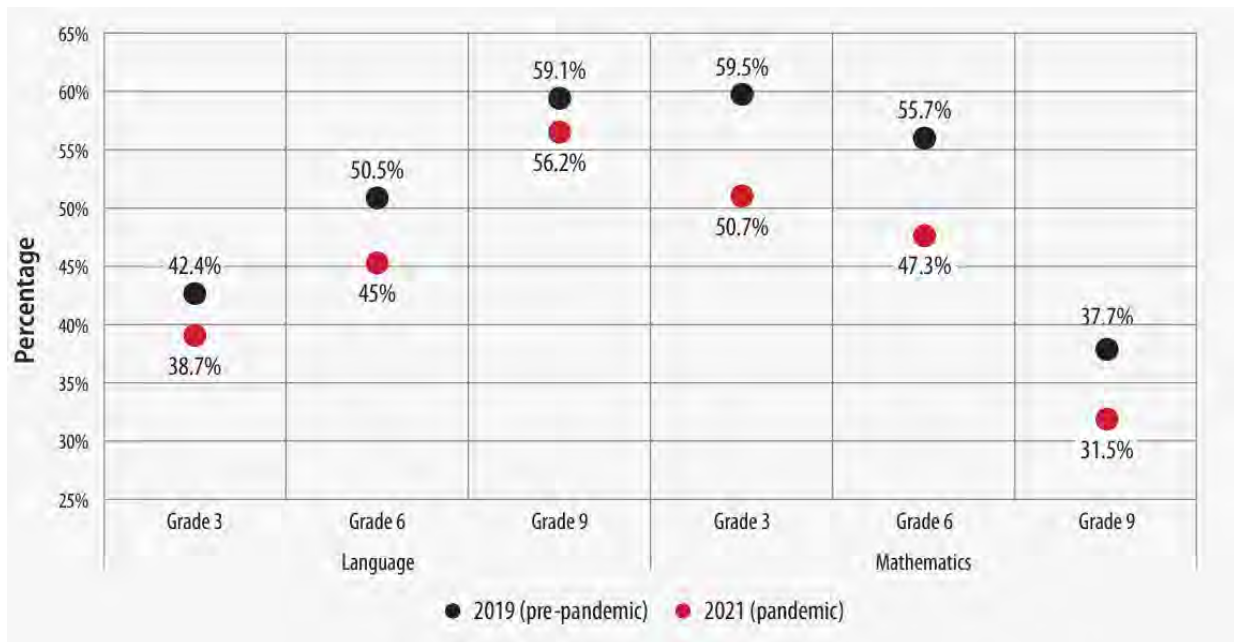


Figure 6: Average scores in Western Cape Systemic Tests in 2019 (pre-pandemic) and 2021 (during the pandemic) - extracted from Van der berg et al. (2022)

There was also evidence of widening inequality in learning outcomes. In 2021, 66% of Grade 3 students in quintile 1 schools (the poorest) failed to achieve a pass in mathematics, up from 48% in 2019 (Van der Berg et al., 2022). In quintile 5 schools (the wealthiest), the failure rate increased from 16% in 2019 to 25% in 2021 (Van der Berg et al., 2022). The Western Cape, traditionally one of South Africa's best-performing provinces along with Gauteng, experienced significant declines, suggesting that other provinces likely fared even worse. The pandemic-related learning declines must be viewed in the context of already low performance levels before COVID-19. Moving forward, addressing these educational challenges will require targeted interventions to support learners and bridge the gaps exacerbated by the pandemic.

2.5 A Historical Overview of Wellbeing and Wellness

The dynamic concepts of wellness and wellbeing have evolved and gained prominence in contemporary discourse across health sciences, psychology, and education (Adedeji et al., 2023). Wellness and wellbeing are often interchanged, but their origins and meanings differ (Stoewen, 2015; Holdsworth, 2019; Bakkeli, 2021). These concepts have evolved over centuries, reflecting societal values shifts and understanding of health and overall life satisfaction (Bakkeli, 2021). The roots of

"wellbeing" extend back to ancient philosophical traditions, where Aristotle's concept of eudaimonia emphasised a holistic and purposeful life beyond mere physical health (Cooper, 2007). This early philosophical foundation laid the groundwork for a broader understanding of human flourishing (Cooper, 2007).

Moving into the Medieval and Renaissance periods, wellbeing found expression in traditional medical practices such as Ayurveda and traditional Chinese medicine (Cooper, 2007). These holistic approaches recognised physical, mental, and spiritual interconnectedness in promoting health (Larre and Rochat de la Vallée, 1984; Frawley and Ranade, 2001; Bakkeli, 2021). The 19th century witnessed a significant paradigm shift, with pioneers like Florence Nightingale emphasising public health and the importance of sanitation, nutrition, and living conditions (Selanders and Crane, 2012). This era marked a transition from disease-focused healthcare to a more comprehensive consideration of preventive measures and overall wellbeing.

The mid-20th century introduced the term "wellness," notably through the work of Dr. Halbert L. Dunn. In his book "High-Level Wellness for Man and Society" (1961), Dunn conceptualised wellness as an active pursuit, emphasising balanced and fulfilling living as integral to health (Dunn, 1961). This marked a shift towards viewing health as a dynamic process influenced by lifestyle choices and personal responsibility. Positive psychology, emerging in the late 20th century, became a transformative force in understanding wellbeing. Carol Ryff's multidimensional model expanded the concept beyond physical health, encompassing autonomy, environmental mastery, personal growth, positive relations, purpose in life, and self-acceptance (Ryff and Keyes, 1995). This psychological framework broadened the scope of wellbeing to include diverse dimensions of human experience.

Cultural perspectives significantly shaped the concepts of wellness and wellbeing. Indigenous knowledge systems, steeped in holistic understandings of health, contribute to the rich tapestry of global approaches (King et al., 2009). These diverse cultural narratives underscore the contextual nature of wellness and wellbeing. The historical origins of "wellness" and "wellbeing" reveal a dynamic evolution shaped by philosophical, medical, and cultural forces. These concepts have undergone a profound transformation from ancient philosophical ideals to modern positive psychology, reflecting societal values and understanding shifts. Acknowledging these

historical foundations enhances our grasp of the multifaceted nature of wellness and wellbeing, underscoring their enduring relevance in contemporary discourse. Moving from the historical narrative surrounding wellness and wellbeing, it is crucial to move into the finer disparities between these terms, especially concerning employee health. This exploration offers a comprehensive perspective on how these concepts impact private high school educators in South Africa.

2.6 The Difference between Wellbeing and Wellness

Understanding the nuanced differences between "wellness" and "wellbeing" is crucial, especially in the context of employee health and the specific research under consideration. The term "wellness" historically emerged in the mid-20th century, emphasising an active pursuit of a balanced and fulfilling life, primarily through preventive health measures (Tulchinsky and Varavikova, 2014; Corbin). It often connotes tangible health-related goals and lifestyle choices. In contrast, "wellbeing" has more ancient roots, with philosophical traditions such as Aristotle's eudaimonia reflecting a broader and holistic understanding of flourishing and purposeful living (Valenzuela, 2022). In contemporary discourse, wellness has evolved into a lifestyle concept encompassing physical fitness, nutrition, stress management, and other health-related activities. It tends to focus on proactive engagement and specific health outcomes (Stoewen, 2017; Diez Roux, 2022). Wellbeing, on the other hand, has expanded beyond physical health to include psychological, social, and environmental dimensions (Stoewen, 2017; Ruggeri et al., 2020). Models like Carol Ryff's highlight autonomy, personal growth, positive relations, purpose in life, and self-acceptance as integral components of psychological wellbeing, Figure 7 (Ryff and Keyes, 1995 cited in Ryff, 2023).



Figure 7: Integral components of psychological wellbeing.

Within the realm of employee health, the term "wellness" is often associated with workplace programmes designed to enhance physical health, prevent illness, and improve lifestyle behaviours (Badul and Subban, 2022). Employee wellness programmes commonly feature fitness classes, health screenings, and stress management initiatives (Chen et al., 2019). The focus is often on reducing healthcare costs, enhancing productivity, and improving satisfaction (Madsen et al., 2017). However, the term "wellbeing" has gained prominence in academic and organisational literature, particularly in the context of a more comprehensive and holistic approach to employee health (Pescud et al., 2015; Ronen and Kerret, 2020; Norozi, 2023). Research recognises that employee wellbeing extends beyond physical health, encompassing psychosocial factors, job satisfaction, work-life balance, and a positive organisational culture (Rees and Breen, 2017; Jones et al., 2019; Norozi, 2023). Positive perceptions and attitudes towards wellness programmes are associated with higher participation rates and healthier employee behaviours and wellbeing (Rees and Breen, 2017).

Considering the research title focused on the perceptions, knowledge, and attitudes of private high school educators in South Africa towards employee wellness programmes, it becomes pertinent to recognise the broader implications of "wellbeing" in this context. Educators facing unique stressors and challenges necessitate a more holistic approach to employee health (McCallum, 2021). The multidimensional nature of wellbeing aligns with the complexities of their roles, which extend beyond mere physical health to include psychosocial factors, job satisfaction, and overall life satisfaction (McCallum, 2021). Embracing a holistic perspective grounded in the concept of wellbeing may offer more comprehensive insights into fostering the health and wellbeing of private high school educators in South Africa.

2.7 An Overview of Wellbeing and Employee Wellbeing

For several decades, wellbeing has increasingly been at the forefront of political, commercial, organisational, academic, and pop culture discourse (Blackburn, 1983; Warren and Payne, 1997; Seligman and Csikszentmihalyi, 1998; Fisher et al., 2002; Ecclestone, 2010; and Bywater et al., 2012, cited in Ekwulugo, 2015). In addition, employee wellbeing advocates state that employers have a legal obligation and duty to ensure that they have taken reasonable and necessary measures to ensure employees' health, safety, and wellbeing (Advisory Conciliation and Arbitration Service - ACAS, 2015). Wellbeing is a complex topic but an essential area to address, especially during challenging economic times when resources are stretched and funding is absent, as is the case in South Africa (Ekwulugo, 2015). A wellness and wellbeing model has been proposed by Horton and Snyder (2009), stating that wellbeing consists of seven dimensions: physical, spiritual, intellectual, emotional, social, environmental, and occupational wellbeing (Horton and Snyder, 2009). Additionally, it was expressed that any individual who is aware of these aspects and consciously works to incorporate them into their life may be deemed as having achieved greater wellness (Horton and Snyder, 2009). Furthermore, wellness can be expanded and sub-categorized into *employee wellbeing*.

Employee wellbeing can be accessed from behavioural features such as job satisfaction, commitment, and work-life balance (Jernigan et al., 2009). It has been shown that quality job performance results from a positive mindset, which stems from

employees' satisfaction with their jobs (Fisher et al., 2004; Orkibi and Brandt, 2015; Bourne, 2020; Dziuba et al., 2020; Maria and Evangelia, 2021). Employment welfare, business, and health policies affect all working-age populations and those around them; it affects productivity levels, organisational effectiveness, and profitability (Ekwulugo, 2015; Dziuba et al., 2020). Additionally, research has shown that if employee health and wellbeing are taken care of, commitment may increase, resulting in high levels of performance (Bates et al., 2003; Mcguire and McLaren, 2009; Kundi et al., 2020; Zhenjing et al., 2022; Lee and Kim, 2023). Research conducted in the United Kingdom (UK) assessed 20 case studies on prominent UK businesses.

This research showed that business leaders have recognised employee health and wellbeing as a strategic business priority that can and has reduced absenteeism and sickness levels and increased engagement, productivity, and profits (Black, 2009). On the contrary, a study found an increasing dissatisfaction inclination of about 25% for full-time working women and 20% for full-time working men (Black, 2009). When considering the importance of healthy employees in increasing job satisfaction and productivity, organisations should include effective wellness programmes that seek to improve general wellbeing, increase job satisfaction, and improve productivity (Richemond, 2016; Stoewen, 2017; Marshall, 2020). Various factors contribute to wellbeing; therefore, satisfactory EWP must include components such as physical-, occupational-, spiritual-, intellectual-, and emotional-wellness, Figure 8 (Stoewen, 2017). All these components work interchangeably and contribute to employee wellbeing, Figure 8 (Stoewen, 2017). This leads to improved employee performance and overall company performance. These wellness aspects are standard wellness features included in most wellness programmes and have been defined for better understanding:

1.6.1 Physical Wellness is the act of employees making health a priority through regular physical activity and conscious nutrition choices, Figure 8 (Pelletier, 2001 in Horton and Snyder, 2001). This aspect of health enables individuals to manage stress by being aware of how their body best functions (Pelletier, 2001 in Horton and Snyder, 2001).

1.6.2 *Occupational Wellness* focuses on employees finding satisfaction and happiness in rewarding meaningful work through utilising personal skills and talents; this may also enhance lifestyle, Figure 8 (Horton and Snyder, 2001).

1.6.3 *Spiritual Wellness* is essential in realising the meaning of life and the lives of others, enabling individuals and employees to be tolerant of others' viewpoints while still holding fast to personal values, goals, and purpose, Figure 8 (Pelletier, 2001 in Horton and Snyder, 2009).

1.6.4 *Intellectual Wellness* is the fourth dimension of wellness and is more cognitive based, Figure 8. It seeks lifelong learning and personal development through creativity, critical thinking, and intuitive expression (Pelletier, 2001 in Horton and Snyder, 2009).

1.6.5 *Emotional Wellness* enables employees to accept, manage and express their feelings, have a positive outlook, and recognise challenges, risks, and conflict as opportunities for emotional growth, Figure 8 (Pelletier, 2001 in Horton and Snyder, 2001). The following section will provide an overview of EWP and how these wellness programmes can attempt to include these various aspects of wellness.

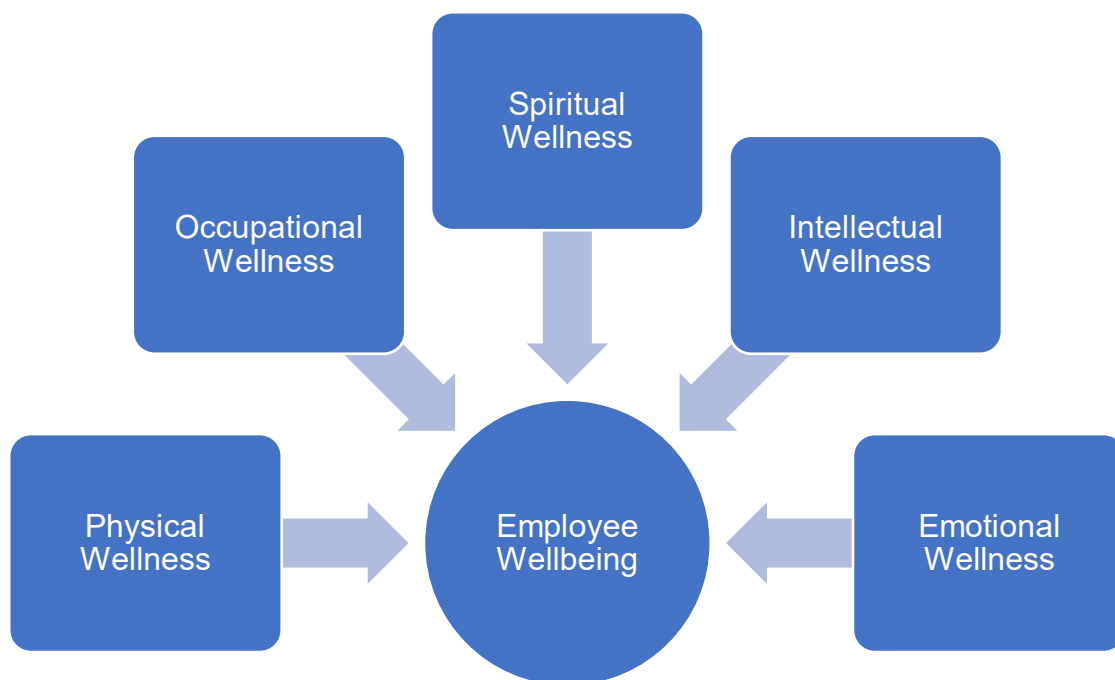


Figure 8: Wellness factors contributing to employee wellbeing.

2.8 An Overview of Employee Wellness Programmes (EWP)

Several international health-related gatherings have indicated the importance of employee wellbeing (Malange, 2019). In the last few decades, researchers have increasingly become interested in determining the relationship between personal behaviour and health outcomes (Joslin et al., 2006; Umberson and Montez, 2011; Short and Mollborn, 2015; Bozek et al., 2020). As a result, workplace and employee-focused health promotion programmes have progressively emerged and gained attention since the mid-70s (Joslin et al., 2006). Literature on the historical background of EWP within the South African context is more limited compared to other regions (Dlamini, 2015). The emergence of wellness management as a workplace programme in South Africa's public sector as a priority resulted from increasing recognition that the health and wellbeing of employees directly influenced the productivity of an entire organisation (Dlamini, 2015). This notion was supported by Csiernik (2005) and is due to adults spending most of their time in the workplace.

Poor working conditions, organisational factors (long working hours or a work-life imbalance) and little regard for the human-care element can progressively lead to a poor and declining workforce health status (Costa, 2010; International Labour Organization, 2016; Chu, 2021; Marsh et al., 2022). This argument has primarily been used by various researchers who have also identified the workplace as becoming a key health-promotion setting worldwide, with corporate strategies and interventions directed at enhancing employees' health and wellbeing through implementing these wellness programmes (Pescud et al., 2015; Kelly et al., 2021; Badul and Subban, 2022). Initially, in the 1970s, these programmes were designed solely to increase levels of physical activity and fitness (Mulvihill, 2003). As a result, modern corporate fitness facilities spread, including occupational and physical therapy and other rehabilitative services (Mulvihill, 2003).

It was in the 1980s that these programmes progressively became more advanced and started to incorporate other wellness factors, such as cardiovascular-oriented markers and blood pressure screening (Attridge, 2016). These programmes were called either Health Promotion Programmes or Health and Productivity programmes (Attridge, 2016). Employee wellness programme advocates later started to argue that "prevention is better than cure", and this foundational belief resulted in offering health

education and promotion activities (Attridge, 2016: 23). The aim was to promote behavioural changes in employees that encourage healthier lifestyles, such as increasing physical activity and adopting healthier habits (Rao, 2013). Later, EWP were conceptualised as “organised programmes to assist and support workers in establishing healthier lifestyles” (Rao, 2013: 23). These programmes became more advanced as various wellbeing and wellness categories were introduced, such as increasing employee awareness of health topics, scheduling behaviour change programmes, as well as establishing corporation policies that support health-related goals (Rao, 2013).

Additionally, these programmes encompass educational, organisational, and environmental activities such as health workshops, health education, medical screening, health coaching, and onsite fitness programmes designed to support behaviour conducive to employee health (Attridge, 2016). Wellness programmes may incorporate other factors, including promoting healthier lifestyles through increasing physical activity, smoking avoidance and cessation, and healthful food selections. Despite the plethora of information about the importance of these wellness programmes, various organisations face varying barriers to incorporating these wellness programmes in their organisation.

2.9 Barriers to Employee Wellness Programmes

The growing popularity of EWP over the last few decades has marked a positive trend toward prioritising employee health and wellbeing in various organisations (Pescud, 2015). However, such programmes have brought a wide range of various concerns and challenges. This section will address a few of the many challenges and barriers of EWP.

2.9.1 Incentives and Penalties

This section will address employers' challenges when implementing incentives/penalties for these wellness programmes. The carrots approach looks at implementing incentives for employees who engage in these programmes (Mujtaba and Cavico, 2013). In contrast, the sticks refer to the penalty's employers might offer or impose as part of their wellness programme to encourage employees to become

healthier (Mujtaba and Cavico, 2013). Table 1 provides an overview of some examples of incentives and penalties which can be implemented into wellness programmes.

Table 1: An overview of some examples of incentives (carrots) and penalties (sticks) in wellness programmes.

Carrots - Incentives	Sticks - Penalties
Gym at work will result in a free gym membership	Unhealthy employees will pay higher healthcare insurance
Healthy low-fat meals in the canteen	Unhealthy employees will receive no healthcare insurance discounts.
Decreasing premiums for losing weight	Loss of healthcare insurance for employees who do not get preventative care
Decreasing premiums for better blood pressure	Not covering surgical procedures unless programmes for non-surgical alternatives are taken.
Free smoking cessation programmes	Denial of reimbursements for employees who do not obtain and maintain a healthy lifestyle

Researchers have added that most employers would prefer the incentives approach as this approach does not alienate employees or cost jobs and promotions, especially due to any pre-existing chronic health conditions (Mujtaba and Cavico, 2013). Some have questioned the legality of how voluntary the carrot approach truly is (Sizemore, 2011). However, if employees will not “voluntarily” stay healthy and consequently, employers continue to see healthcare costs rise, employers may consider “forcing” employees to be healthy by penalising unhealthy employees (Sizemore, 2011). Kwoh (2013), in consolidation with the punitive measures, stated that people respond more effectively to potential losses, such as penalties, than expected gains, such as rewards.

Despite Kwoh's evidence supporting the sticks approach, there are critics who have gone against this punitive approach to wellness in the workplace (Mujtaba and Cavico, 2013). This approach may lead to an increase in potential discrimination and harassment in the workplace (Sizemore, 2011). Additionally, researchers debated that the sticks approach may erode the informed consent of the confidential employee-patient privacy law in medical decision-making (Lamkin, 2013). Furthermore, there are labour organisations, such as the American Federation of Labor and Congress Industrial Organizations (AFL-CIO), that are against compulsory health tests, arguing that health tests should be considered personal matters and due to this, they should not be tied to any form or benefits at work (Mujtaba and Cavico, 2013).

Various organisations have raised concerns regarding the wellness programme, opting to reward and penalise participants (du Preez, 2010; Mujtaba and Cavico, 2013; Dlamini, 2015; Perrault et al., 2020; Schaefer, 2024). Consumer advocates, unions and voluntary organisations have expressed concerns about programmes offering rewards and penalties based on achieving health status goals (Dlamini, 2015). Additionally, programmes that enhance health may move healthcare costs from the healthy to the sick (Dlamini, 2015). This may discourage refunds on health insurance that forbid an individual health status factor in determining insurance premium rates (Dlamini, 2015). Furthermore, consumer advocates, unions and voluntary organisations have argued that programmes designed to change employees' behaviour via the place of employment may invade employees' privacy (Volp et al., 2011).

2.9.2 Insurance Costs

Another argument is that attaching insurance costs to the capacity to attain specific health status objectives may be considered a form of discrimination against individuals in low-income careers or minorities of race (Dlamini, 2015). These employees may already have health conditions targeted by wellness programmes, which could result in more difficulties in healthy living (Dlamini, 2015). These difficulties might include work-related factors such as high work stress levels, work-life balance challenges, and job security (Volp et al., 2011). On the contrary, these difficulties may include personal

issues, like financial burdens and environmental factors, unsafe communities, and lack of healthy food (Lie et al., 2012).

2.9.3 Lack of Time

Critics have also raised concerns that most organisations and management teams do not allocate enough time for their employees to engage in wellness programme activities as they are required to dedicate time to their work duties and responsibilities (Chartier, 2011; Kolbe-Alexander et al., 2012; Lieberman, 2019; Marshall, 2020). Additionally, it has been argued that due to the time factor, management cannot expect employees to participate in these programmes after working hours or during their lunch breaks (Person et al., 2010; Chartier, 2011). Employers, managers, and leaders within organisations must ensure that work responsibilities do not conflict with wellness programmes (Lieberman, 2019). An idea to combat this is that employers should designate time during the day for employees to participate in these wellness programmes. Organisation leaders have proposed using natural breaks throughout the working day to overcome this challenge, thus allowing employees to participate without having too much time away from work (Chartier, 2011).

2.9.4 Lack of Funding

Lastly, one of the primary hurdles to implementing EWP is the financial aspect. Funding and a lack of resources can hinder EWP (Person et al., 2010; Dlamini, 2015; Conradie et al., 2016). Although partaking in certain wellness activities (such as group walks in the park or jogs) may be considered “free”, specific components of an EWP costs money (Dlamini, 2015). For example, for companies to subscribe to wellness apps, a subscription fee may be required to access the app. Another example is if EWP requires baseline body assessment measurements, the company must hire health professionals to take these measurements. Regardless of their industry, organisations operate within defined budgets distributed among different departments and functions (Isaac et al., 2015; Mishra, 2018; Shawe, 2023).

Additionally, operational necessities, infrastructure, personnel costs, technology upgrades, and other pressing needs often precede employee wellbeing initiatives (Mishra, 2018; De Lange et al., 2019; Bhatt et al., 2023). As a result, the budget may have limited financial bandwidth to accommodate the initiation and sustenance of employee wellness programmes (Mishra, 2018). The perceived priority of operational needs over employee wellbeing creates a financial barrier to the holistic development of wellness initiatives (Mishra, 2018). The allocation of resources within the budgetary framework becomes a significant challenge as decision-makers weigh immediate and tangible benefits against the long-term advantages associated with staff wellbeing programmes (Mishra, 2018).

2.9.5 Employee Participation

Participation of employees in a wellness programme refers to “the extent to which employees behaviourally engage in a voluntary workplace programme” (Marin-Farin et al., 2023). From this, one can deduce that these wellness programmes will not be successful without the participation and cooperation of an organisation’s employees (Marin-Farin et al., 2023). A meta-analysis conducted on 30 studies to investigate the employee participation rate found that, on average, only 44% of the employees invited to participate in the programme participated (Marin-Farin et al., 2023). Ryde et al. (2019) reported participation was as low as 4%, with only eight out of the 30 programmes having more than a 70% participation rate (Marin-Farin et al., 2023).

Banks investigated three types of employee participation rates (Marin-Farin et al., 2023). The first type was for employees intending to participate in EWP, the second was the retention rate, and the third was the overall average of employees who attended and completed the wellness programme (Banks et al., 2018 in Marin-Farin et al., 2023). It was reported that 51.4% of employees intended to participate in the wellness programme, 74.9% for the second rate, and only 36.4% of employees completed the programme (Banks et al., 2018 in Marin-Farin et al., 2023). The study highlights that although employees may initially be interested in participating in a wellness programme, this gradually declines. Therefore, despite the benefits of these programmes to both employees and employers, these benefits are contingent on employees participating. There are various reasons for non-participation, some of them include:

1. Lack of motivation
2. Concerns about protection and confidentiality
3. Self-consciousness related to personal health matters,
4. Lack of sufficient knowledge about a specific wellness programme,
5. Employees may perceive these programmes as not being beneficial for them,
6. A physical and social workplace environment that interferes with participation or health and wellness goals (Marin-Farin et al., 2023).

2.9.6 Individual Employee Motivation

The success of EWP is often dependent on individual employee motivation, which can pose significant barriers to implementation (Lewis, 2016; Osborne and Hammound, 2017). Motivation is pivotal in driving employee engagement and participation in wellness programmes (Lewis, 2016). However, individual motivations are inherently diverse and influenced by a multitude of factors, ranging from personal beliefs and values to social influences and environmental cues (Osborne and Hammound, 2017). One key barrier to employee engagement with wellness programmes lies in employees' varying levels of intrinsic and extrinsic motivation (Deci and Ryan, 2015; Lewis, 2016). While some individuals may be intrinsically motivated by a genuine interest in improving their wellbeing, others may exhibit lower levels of motivation, relying more heavily on external rewards or incentives to participate (Lewis, 2016). Psychological theories, such as Self-Determination Theory (SDT), provide valuable insights into the dynamics of individual motivation and its impact on behaviour change (Ryan and Deci, 2000; Deci and Ryan, 2015).

According to SDT, individuals have an innate psychological need for autonomy, competence, and relatedness, influencing their motivation and engagement in activities (Deci and Ryan, 2015). When wellness programmes do not adequately meet these needs, individuals may experience reduced motivation and resistance to behavioural change efforts (Deci and Ryan, 2015). Moreover, individual differences in perceived self-efficacy, or one's belief in their ability to successfully perform a behaviour, can significantly influence motivation and behaviour change outcomes (Deci and Ryan, 2015). Employees with low self-efficacy may perceive wellness programme goals as unattainable or may lack confidence in their ability to sustain health-promoting behaviours over time, leading to disengagement and non-adherence

(Deci and Ryan, 2015). Beyond individual motivation, a myriad of barriers exists to changing human behaviour, encompassing both internal and external factors (Deci and Ryan, 2015).

One such barrier is the resistance to change, rooted in the natural tendency of individuals to maintain the status quo and resist unfamiliar or disruptive behaviours (Mares, 2018). Change, particularly in health-related behaviours, often requires individuals to step out of their comfort zones, confront ingrained habits, and navigate potential social and environmental obstacles (Mares, 2018; Heino et al., 2021). Additionally, the complexity of human behaviour presents challenges in predicting and influencing individual actions reliably (Heino et al., 2021). Behaviour change theories highlight the nonlinear and dynamic nature of behaviour change processes, emphasising the importance of tailoring interventions to individuals' readiness to change and addressing multiple determinants of behaviour simultaneously (Heino et al., 2021).

Furthermore, social and environmental factors, including peer influences, organisational culture, and societal norms, can facilitate or hinder behaviour change efforts (Heino et al., 2021). Workplace cultures prioritising long hours, stress, and productivity over employee wellbeing may inadvertently perpetuate unhealthy behaviours and undermine the effectiveness of wellness initiatives (Heino et al., 2021). Individual employee motivation serves as a critical barrier to the successful implementation of EWP within organisational settings. Understanding the complexities of individual motivation, as influenced by psychological factors and behavioural dynamics, is essential for designing effective wellness interventions tailored to employees' needs and preferences.

Moreover, addressing broader barriers to changing human behaviour, including resistance to change and environmental influences, requires a multifaceted approach that integrates psychological insights with organisational strategies to promote a culture of health and wellbeing. After discussing the obstacles that can impede the effective deployment of EWP, organisational leaders encounter formidable hurdles in fostering employee wellbeing. The following section will explore the vital aspect of quantifying the Return on Investment (ROI) linked to these initiatives, illuminating the financial considerations and strategic implications for organisations.

2.10 Employee Wellness Programmes Return on Investment (ROI)

Organisational leaders often grapple with concerns related to the quantifiable return on investment (ROI) associated with employee wellness programmes (Pelletier, 2015). Demonstrating the direct impact of such initiatives on organisational success can be challenging, mainly when financial decision-makers prioritise investments with more immediate and measurable outcomes (Pelletier, 2015). The lack of a clear and compelling connection between wellness initiatives and operational success can impede the financial commitment to comprehensive programmes. A primary objective for most organisations is to increase revenue (Omura and Foster, 2014; Bednar et al., 2018). Therefore, it is necessary to demonstrate that their EWP supports this objective and is effective in securing return on investment (Madison et al., 2011).

Additionally, several companies should direct their resources towards developing a wellness programme with a positive cost-benefit analysis, thus proving its various benefits (Dlamini, 2015). Companies need to incorporate methods and interventions to improve and increase employee participation in these wellness programmes (Madison et al., 2011 in Dlamini, 2015). By doing this, organisations can ensure that they yield positive results from increased employee participation and that the benefits of EWP can be reaped by employees and employers alike (Liu et al., 2012). The company will benefit from increased revenue through high employee productivity, healthier and happier workers with less employee turnover, less illness absenteeism, and reduced healthcare costs (Liu et al., 2012; Dlamini, 2015). Companies should prioritise taking care of their employees and further consider investing in their health and wellbeing (Dlamini, 2015). Studies have emerged from assessing wellness programmes health and financial returns (Lewis, 2016). Positive studies have emerged from assessing health and financial returns on wellness programmes (Lewis, 2016). A review of 12 studies was conducted and showed that results from workplace wellness programmes improved health and financial benefits to the company (Lewis, 2016). Additionally, this study revealed that a positive ROI was achieved by implementing and applying well-constructed workplace wellness programmes (Lewis, 2016).

Supporting these findings, Marin-Farin et al. (2023) meta-analysis of 32 studies underscores the cost-saving potential of wellness programmes for organisations.

Notably, most studies reviewed have indicated per-employee annual health-cost savings surpassing the actual costs of implementing wellness initiatives (Spector, 2002; Travis and Ryan, 2004; Smit et al., 2008). Marin-Farin et al.'s study (2023) contributes additional evidence, illustrating a positive impact of EWP on productivity, cardiorespiratory fitness, muscle strength, and musculoskeletal symptoms. Similar positive trends are observed in studies such as Rabarison et al. (2017) and Rossi (2017), which report reduced absenteeism levels post-implementation of wellness programmes.

However, Marin-Farin et al. (2023) comprehensive evaluation of 51 studies from 1984 to 2012 introduces a nuanced perspective, highlighting methodological differences as a potential source of mixed results concerning ROI. Despite most studies showing positive ROI or benefits, a negative correlation exists between study methodological quality and reported ROI (Marin-Farin et al., 2023). The assessment criteria, using the British Medical Journal Economic Evaluation Working Party checklist, revealed variations in quality (Marin-Farin et al., 2023). Notably, even a high-quality study in the construction industry showed a negative ROI, while a low-quality study in local governments reported a positive ROI (Marin-Farin et al., 2023).

2.11 Efficacy of Employee Wellness Programmes

These programmes have become increasingly popular and familiar, yet the efficacy of these programmes in improving health outcomes remains a topic of debate. It was reported in 2009 that 92% of employers with 200 or more employees offered wellness programmes (Mattke et al., 2013). Wellness programmes have targeted specific behavioural changes such as exercise, addressed by 63% of employers that have incorporated wellness programmes; smoking cessation, addressed by 60%; and weight loss, targeted by 53% (Mattke et al., 2013). By 2018, in the United States, 82% of large firms and 53% of small employers were included in wellness programmes, amounting to an \$8 billion industry (Miller, 2019). This widespread increase in interest was due to public investments which sought to promote the development of workplace wellness through the Affordable Care Act (ACA) (Pollitz and Rae, 2018). The Affordable Care Act, signed into law in 2010 by President Obama, is a landmark healthcare reform legislation designed to address key issues in the U.S. healthcare system (Blendon et al., 2014).

There is limited research on EWP as it has failed to account for the causal evidence of these effects on health and economic outcomes (Miller, 2019). Observational studies have been unable to have accurate conclusions due to their lack of valid control groups, selection bias, and small samples (Miller, 2019). An analysis of data from comprehensive experimental studies has brought to light the scarcity of this study method and has also produced mixed results, with most of the more rigorous studies now needing to be updated (Fries et al., 1994; Leigh et al., 2012). Additionally, many of these studies have focused on specific wellness components, such as smoking cessation and weight loss, using an intervention of limited duration (Volpp et al., 2008; Cahill et al., 2015).

The existing body of research on EWP presents a nuanced picture, revealing both positive and contradictory outcomes regarding health improvement, increased productivity, and cost savings for organisations. Researchers have collectively emphasised the positive impact of wellness programmes, demonstrating improvements in health and wellness markers along with a notable 10% increase in productivity (Baicker et al., 2010; Jones, 2020). A study by Smith et al. (2021) examined the effects of a comprehensive wellness programme on employee health markers, including smoking, hypertension, cholesterol, and diabetes. The results indicated a significant reduction in smoking prevalence among programme participants, corresponding improvement in overall cardiovascular health (Smith et al., 2021). However, no significant changes were observed in hypertension, cholesterol, or diabetes outcomes (Smith et al., 2021).

Additionally, researchers have investigated whether these programmes resulted in behavioural changes and how these changes influenced organisational performance markers (Attridge, 2005; 2012; 2016). This research yielded abundant empirical evidence supporting the fact that comprehensive EWP can not only trigger behavioural and lifestyle changes but can also influence changes in organisational performance markers, Figure 9 (Attridge, 2012). These markers ranged from employee health, increased employee productivity, performance, motivation, and satisfaction to decreased healthcare costs for the organisation and the employees and many other factors contributing to organisational performance, Figure 9 (Attridge, 2005; 2012; 2016).



Figure 9: Benefits ascribed from wellbeing programmes to organisational performance, extracted from Edwards (2019).

Collaborating with the Gallup Organisation, researchers have extensively examined the relationship between employee wellbeing, EWP, and various organisational performance markers (Richemond, 2016; Gubler et al., 2018; Adams, 2019; Krekel et al., 2019; Jaskeviciute et al., 2021). It was hypothesised that there would be a direct flow of “happier workers working better [and performing better]” transgressing into positive impacts at an organisational level (Krekel et al., 2019: 10). Throughout the years, Gallup assembled 339 independent research studies with observational data on employee wellbeing and organisational performance (Krekel et al., 2019).

There was a total of 1,882,131 employees and a performance of 82,248 business units originating from 230 independent organisations across 49 industries in 73 countries (Krekel et al., 2019). This study found that higher employee wellbeing was associated with decreased staff turnover, higher employee productivity, customer loyalty, profitability, and overall firm performance, Figure 10 (Krekel et al., 2019). For performance in the workplace, there are four leading intrinsic organisational performance indicators: *customer loyalty*, *employee productivity*, *profitability*, and *staff turnover*, Figure 10 (Krekel et al., 2019). This study revealed that employee wellbeing

increases customer loyalty, productivity, and profitability while simultaneously decreasing staff turnover (Krekel et al., 2019).

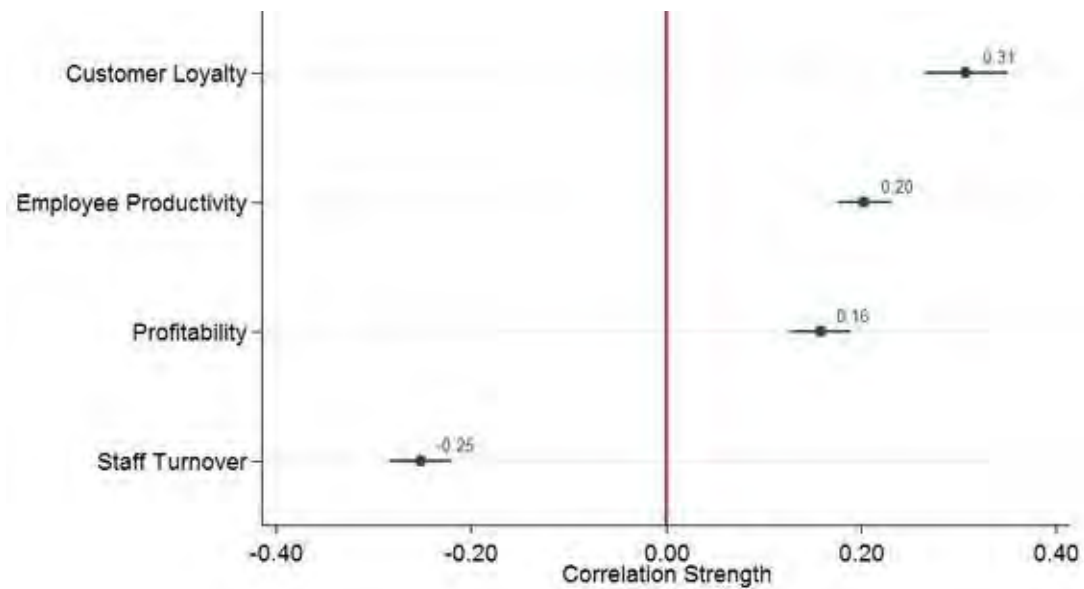


Figure 10: Correlation between employee wellbeing factors and organisational performance markers extracted from Krekel et al. (2019).

Contrastingly, Miller's study (2019) challenges the overarching positive narrative surrounding wellness programmes. This Harvard study, utilising a clustered randomised trial, found unimpressive results after 18 months of exposure to EWP (Miller, 2019). While employees reported statistically significant rates of engaging in regular exercise and managing weight, no significant differences were observed in other health behaviours, clinical markers, healthcare spending, or absenteeism. A meta-analysis conducted by Jones and colleagues (2023) reviewed several studies evaluating the effectiveness of wellness programmes in improving health outcomes.

The meta-analysis found limited evidence to support the efficacy of these programmes, particularly regarding long-term changes in health markers such as hypertension, cholesterol, and diabetes (Jones et al., 2023). While short-term improvements were observed in some studies, the overall impact on employee health was deemed inconclusive (Jones et al., 2023). Like Jones et al.'s (2023) study, a systematic review by Brown et al. (2022) examined the effectiveness of different wellness interventions in workplace settings. The review included studies assessing various health outcomes, such as smoking cessation, blood pressure control, and cholesterol management (Brown et al., 2022). While some interventions showed

promising results in the short term, the authors noted a lack of sustained improvements over time, highlighting the challenges in maintaining long-term behaviour change among employees (Brown et al., 2022).

Hart et al.'s study (2019) specifically focused on burnout in emergency medicine residents, revealing that the wellness programme did not improve burnout effects. Resident physicians reported worsened general burnout, questioning the choice of intervention or the program's design (Hart et al., 2019). These contradictory findings highlight the complexity of assessing the effectiveness of EWP. While numerous studies underscore positive impacts on health outcomes and productivity, methodological variations and contextual factors may influence the reported ROI and overall effectiveness.

Furthermore, a systematic review of the impact of wellness programmes found mixed results regarding the impact on health-related behaviours, substance abuse, and physiological markers, Table 2 (Osilla et al., 2015). Eight of 13 studies found improvements in physical activity, six 12 in diet, six 12 in body mass index/weight, and three of four in mental health, Table 2 (Osilla et al., 2012). A total of six of seven studies on tobacco and two of three on alcohol use found significant reductions, Table 2. All four studies on absenteeism and 7 of 8 studies on healthcare costs estimated significant decreases in burnout, absenteeism and presenteeism (Osilla et al., 2012).

Table 2: Reported outcomes of wellness programme evaluations extracted from Osilla et al. (2012).

Outcomes	All Evaluation Designs (N = 33)			Randomized Controlled Trial (n = 17)			Non-random Comparison Group (n = 6)			Observational Design (n = 10)		
	Total	Beneficial	No	Total	Beneficial	No	Total	Beneficial	No	Total	Beneficial	No
		Effect	Effect		Effect	Effect		Effect	Effect		Effect	
Exercise	13	8	5	7	3	4	2	1	1	4	4	0
Diet	12	6	6	7	3	4	2	1	1	3	2	1
Physiologic markers	12	6	6	6	3	3	1	1	0	5	2	3
Smoking	7	6	1	4	4	0	0	0	0	3	2	1
Alcohol use	3	2	1	3	2	1	0	0	0	0	0	0
Healthcare costs	8	7	1	1	1	0	4	4	0	3	2	1
Absenteeism	4	4	0	0	0	0	0	0	0	4	4	0
Mental health	4	3	1	1	0	1	1	1	0	2	2	0
All outcomes	63	42	21	29	16	13	10	8	2	24	18	6

Recent research further examined the role of organisational factors in shaping EWP's effectiveness. For instance, a study by Lee and colleagues (2024) investigated the influence of organisational culture and leadership support on the success of wellness initiatives. The findings suggested that a positive organisational culture, characterised by supportive leadership and a focus on employee wellbeing, was associated with greater programme engagement and improved health outcomes (Lee et al., 2021). Future research endeavours should prioritise high methodological quality, considering the *unique* nature of the intervention and accounting for diverse variables that influence programme outcomes.

2.12 Employee Wellness Programmes for Educators in South Africa

Despite the crucial role of a nation's education system in its overall health and long-term success, the teaching profession is currently facing significant challenges (Idris et al., 2012; Raghupathi and Raghupathi, 2020; Barnes and Lang, 2023). The scarcity of available resources further worsens these stressors, impacting both educators and learners (Ortillo and Ancho, 2021). Consequently, implementing wellness programmes to improve educators' wellbeing is imperative (Ortillo and Ancho, 2021). Such programmes ensure that educators are physically and mentally fit to deliver quality teaching (Kipps-Vaughn et al., 2012), thereby maximising their effectiveness in the classroom (Ortillo and Ancho, 2021).

Numerous studies worldwide have highlighted the importance and benefits of EWP tailored for educators (Swarbrick et al., 2011; Anenson et al., 2013; Royal et al., 2016). However, despite the wealth of evidence supporting the effectiveness of these programmes, they remain underutilised in South African private schools, with most existing initiatives concentrated in the U.S and European Union regions (Ortillo and Ancho, 2021). The absence of research on this phenomenon in South African private schools underscores the need for further investigation.

Moreover, when designing wellness programmes for educators in South Africa, it is crucial to consider broader systemic issues such as lack of resources and funding from schools (Kruger, 2019). These stressors may lead to unhealthy behaviours and further worsen educators' wellbeing. Additionally, safety concerns, including violent community protests and crime incidents, must be addressed to create a supportive and conducive work environment for educators (Kruger, 2019). Many existing wellness

programmes in South Africa focus primarily on physical wellbeing (Kruger, 2019). Additionally, they are often limited to HIV and AIDS education, neglecting broader issues such as racism, poverty, lack of funding and resources, poor infrastructure, bullying, sexual harassment, and drug abuse (DBE RSA, 2015). Therefore, there is a need for more comprehensive and inclusive wellness programmes that address the multifaceted challenges faced by educators in South Africa (Kruger, 2019).

The DBE in South Africa has recognised the importance of EWP and has committed to promoting learners' and educators' health and wellbeing (DBE RSA, 2023). Through various policy initiatives and resource allocations, the DBE seeks to create a supportive learning environment that prioritises the health and wellbeing of all stakeholders (DBE RSA, 2023). By addressing systemic issues and investing in comprehensive wellness programmes, South Africa can create a more equitable and inclusive education system that supports the wellbeing and success of educators and learners alike.

2.13 Summary

The literature stresses the crucial role of positive employee perceptions, knowledge and attitudes towards EWP in ensuring programme success. Existing research suggests a direct link between favourable employee perceptions and increased programme participation, fostering healthier behaviours among participants. This insight is pivotal for understanding the dynamics of EWP success and emphasises the importance of cultivating positive attitudes among high school educators in South Africa. In essence, the review underscores the importance of addressing employee wellbeing, specifically among high school educators in the South African context. It positions EWP as an instrumental tool not only in promoting physical and mental health but also in elevating job satisfaction and overall productivity. The literature also highlights the significance of employee participation identifying it as pivotal factors that influence the effectiveness of these initiatives. This comprehensive overview sets the stage for understanding the nuanced interplay between employee wellbeing and the successful implementation of EWP within the unique landscape of South African high schools. Lastly, to achieve the aims and objectives of this study, it is crucial to explore the methodologies employed; this will be discussed in the next chapter.

CHAPTER 3 | METHODOLOGY

3.1 Introduction

Chapter 3 provides a detailed explanation of the research method. These methods are employed to investigate private high school educators' perceptions, knowledge, and attitudes towards employee wellness programmes (EWP). The chapter starts off by providing insights into the research design used to explore the research questions. Then, it moves on to detailing the study population and sample size. Third, it details the procedural steps that Jenn (2006) and Dura and Driga (2011) used to construct the self-administered online questionnaire used in this study. This chapter also addresses the pilot study conducted to test the reliability and validity of the constructed questionnaire. After that, the data collection procedures are provided, followed by the ethical considerations for this study. Lastly, an overview of the data analysis methods is provided.

3.2 Study Design

The study design was a quantitative study with qualitative supplementation. The study used a once-off, specifically designed questionnaire that explored EWP perceptions, knowledge, and attitudes among South African private high school educators.

3.3 Study Population and Sample Size

3.3.1 Study Population: Inclusion and Exclusion Criteria

The study population were current full-time teachers who had experience as secondary school educators in the private South African education system. Participants who were managerial staff, such as the headmaster and deputy headmaster, were not included in this study; these staff members are part of management, meaning they may have different perspectives compared to the teaching staff. Furthermore, this study excluded non-academic staff, such as administrative, financial, support and services departments. These individuals were excluded as they share different work demands, challenges, and pressures than pupil-facing academic educators.

Primary and preschool educators were also excluded from this study as they are not faced with the same job demands regarding extramural activities as private high school educators, and, therefore, they may have a better work-life balance. All public schools were excluded from this study as there is a significant body of research that has been conducted on public schools in South Africa and none on private institutions (Moorosi et al., 2020). Additionally, all public schools were excluded as obtaining consent from the Department of Education is a time-intensive process, which is particularly challenging within the mandated two-year timeframe for completing this master's thesis.

3.3.2 *Sample Size*

In a similar study investigating perceptions, knowledge, and attitudes concerning EWP, Dlamini (2015) had a sample size of 60. After reviewing 2533 research papers, seven of which were qualitative, Mason (2010) concluded that the suitable sample size for these types of studies should be a minimum of 40 participants. Additionally, various other studies exploring the perceptions, knowledge, and attitudes of EWP have shown that a suitable sample size ranges from 40 – 200 (Mason, 2010; 2013; Edwards and Marcus, 2018; and Malange, 2019).

There are 137 private secondary schools in South Africa; several schools were chosen from each province. For the researcher to attempt to accurately depict and mimic the private education system in South Africa, 30% of the total private high schools in that province were randomly selected using and filtering through the Independent Schools Association of Southern Africa (ISASA) online school finder portal (Mason, 2010). This is why more private schools were chosen from Gauteng, Kwazulu-Natal, and Western Cape, as these three provinces contain most of the private secondary schools in South Africa. Once the total number of private secondary schools was decided for each province, the schools were randomly selected and invited to participate.

Of the 137 privately governed secondary schools, 45 nationwide were invited to participate in this study, Figure 11. From the various schools that were chosen, ten of the institutions responded, accepted and expressed their interest in participating in the study; seven institutions expressed that they would not be interested in participating in the study, and a further 28 institutions did not respond to any of the emails (three

emails were sent to each of the institutions: an initial invitation to the study, a follow-up/reminder-email and a last-call/invitation email). The institutions that either stated in writing that they would not participate in this study or those who did not respond to the research invitation were excluded from the research project. Schools were informed about the inclusion criteria. The researcher requested that the schools' administrators invite educators to participate in this study through a distributed email, Appendix B, through their academic mailing list. This email invited all eligible educators to participate in the study. This resulted in a total of 126 participants from 10 different institutions across different regions of South Africa in different departments within the various institutions. Participants included educators/teachers who were full-time academic staff members from the ten various institutions. Convenience sampling was also considered for the education institutions willing to participate in this study.

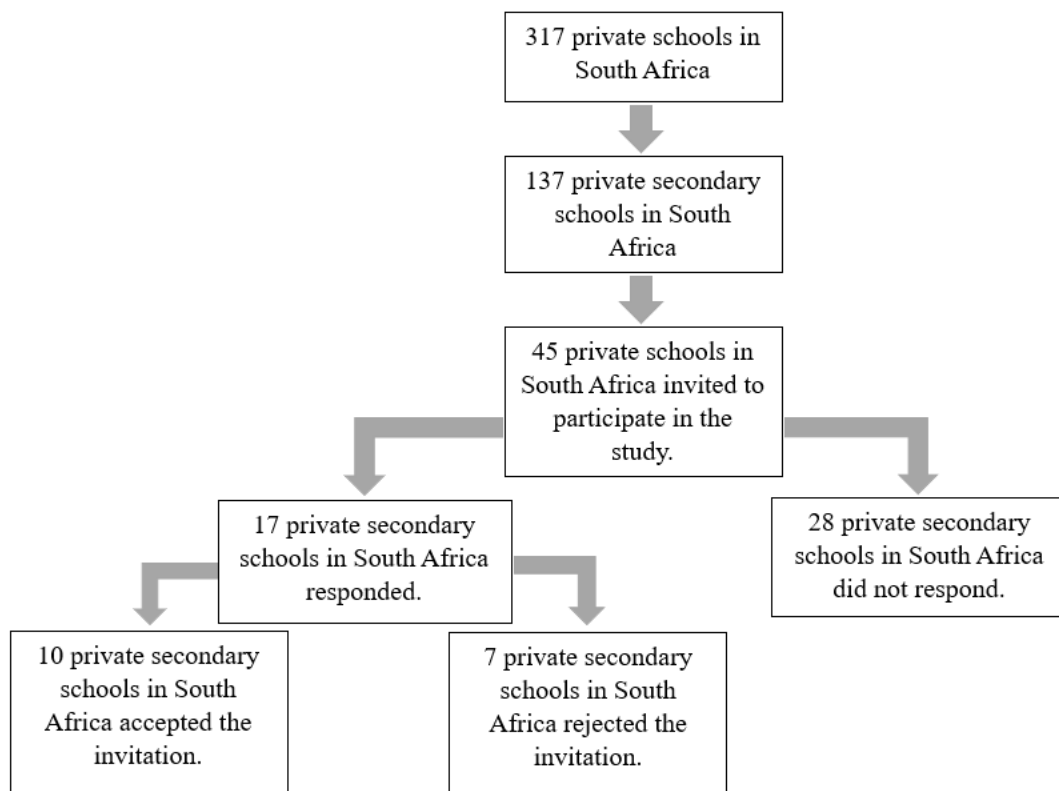


Figure 11: Process flow diagram showing the number of schools participating in the study.

3.4 Instruments and Data Collection Tool

A data collection tool was constructed using a Google Form questionnaire. Data collection occurred remotely by distributing a link to the electronic questionnaire via

email. This questionnaire followed Jenn's (2006) and Dura and Driga's (2011) guidelines for designing and constructing an effective questionnaire. Additionally, the tool was constructed according to previous studies, questionnaires and surveys exploring the practices/perceptions, knowledge, and attitudes of EWP in differing industries (Fisher et al., 2002; Dlamini et al., 2015; Ekwulugo, 2015; Ekwulugo, 2015; Malange, 2019; Andrade et al., 2020; Butler, 2021).

The variables from this study were updated in line with findings from previous studies, primary and secondary data collection and literature reviews of perception, knowledge, and attitudes. This method was used to analyse, consolidate, and develop data and thus effectively measure secondary educators' perceptions, knowledge, and attitudes (Fisher, 1998; Fisher et al., 2002; Fisher, 2008; Fisher, 2009). The tool followed a sequential order guided by previous research. Questions were close-ended with limited open-ended response options; therefore, the information gathered was both qualitative and quantitative, Appendix K.

The questionnaire consisted of three sections. Responses to the questions in sections two and three were rated on a Likert scale (1 – “strongly disagree”, 2 – “disagree”, 3 – “undecided/neutral”, 4 – “agree”, and 5 – “strongly agree”).

- Section one (questions 1-12) was related to participant demographics - including age category, sex, level of education, employment type, duration of employment as an educator, hours spent working overtime, hours spent at extramural activities per day and how many lessons educators taught per week.
- Section two (questions 13 to 22) explored the educators' knowledge, perceptions, and opinions on EWP. The researcher aimed to gain insight into the following perceptions of the participants:
 - Whether they understood what an EWP was through definition.
 - What their opinions and perspectives were and whether their institutions deem them necessary.
 - Understanding of whether their institution may/or may not have these wellness programmes,
 - Whether they were aware that employee health and wellbeing may be linked to absenteeism levels,

- Whether they were aware that employee health and wellbeing may be linked to presenteeism levels,
 - Whether they were aware that employee health and wellbeing may be linked to performance levels,
 - Whether they were aware of the benefits and disadvantages of these programmes,
 - Whether they were aware that wellbeing is made up of different components
- Section three (questions 23 – 30) explored the educators' attitudes and feelings towards wellness programmes. The researcher aimed to gain insight into the following attitudes of the participants:
 - Whether their institution should consider incorporating a wellness programme and elaborating on why they may feel this way
 - Understanding how they view these programmes and further elaborating on these feelings.

3.4.1 Questionnaire Readability and Reliability

The questionnaire was put through a readability/level of language test via an online analysis tool; WebFx, a flexible readability software (<https://www.webfx.com/tools/read-able/>). This formed part of the pilot study. Additionally, this test estimated the level of education the responders needed to read a passage of text easily. This test considered two factors: the first relates to sentence structure and typically measures the average number of words per sentence. Secondly, this test considered readability, which related to the questionnaire's word structure and syllable count (average number of syllables per word). Experts advised that texts should reflect a readability of approximately an 8th grade (13 – 15 years old). The questionnaire scored 50.4 out of 100, indicating that this questionnaire could easily be understood and completed by 15–16-year-olds. Considering the education level required for high-school educators, the readability thereof was deemed acceptable.

The readability of the questionnaire was evaluated using three scoring systems: Flesch Reading Ease Score, Flesch-Kincaid Grade Level, and Gunning-Fog Index.

These readability scores were chosen due to their validation and consistency in results (Paasche-Orlow et al., 2003; Janan and Wray, 2012; Swiecikowski and Kulacz, 2020; Kelly et al., 2021), along with their user-friendly nature for content creators (Worrall et al., 2020; Ferguson et al., 2021; Oydanich et al., 2022). The Flesch Reading Ease Score and Flesch-Kincaid Grade Level are the most widely used readability scoring systems, facilitating broad comparability and generalisability of results (Paasche-Orlow et al., 2003; Wang, 2013). The Gunning-Fog Index was included to add a further level of nuance to the readability analysis, as it accounts for word complexity and unfamiliarity by considering common words with higher syllable counts that are not deemed complex (Ferguson et al., 2021).

The Flesch Kincaid Reading is based on a 0 - 100 scale, with a high score meaning that the text is easier to read and a low score suggesting that the text is complicated to understand. The questionnaire scored 50.4, indicating that it was easily readable. Grade Level Indicators included the following criteria: the Flesch Kincaid Grade Level, Gunning Fog Score, and Smog Index. The Flesch Kincaid Grade Level represents the grade an individual would need to be in to have been able to comprehend the material on a page. This questionnaire had a score of 8.5 for this indicator. Gunning Fog Score reflected the years of formal education responders needed to comprehend the questionnaire – the questionnaire had a score of 5.3 for this indicator. Smog Index was the indicator used to estimate the years of education a person needed to comprehend the writing of the questionnaire – the questionnaire had a score of 8.2.

3.4.2 Questionnaire Face and Content Validity

Face and content validation processes and reliability internal consistency checks were examined. These were integral components in scrutinising the robustness of the questionnaire. The questionnaire was sent to two distinguished qualitative research experts, Dr Obiora, and Dr King to evaluate the face and content validity to ensure a comprehensive and well-rounded evaluation, Appendix H and Appendix I. Their expertise in qualitative research methodologies added depth to the validation process, enriching the analysis of the questionnaire's face and content validity. Leveraging the insights from these experts not only enhanced the overall quality of the research instrument but also provided valuable perspectives that contributed to the methodological rigour of the self-conducted research.

Face validity was evaluated based on criteria such as grammar appropriateness, clarity, unambiguity of items, correct spelling, sentence structure, font size appropriateness, and overall instrument construction and format, Appendix H, and Appendix I. Regarding content validity, the experts assessed whether items were objectively structured, positively classified under thematic categories, exhibited no inconsistencies, and presented no difficulties regarding clarity and conciseness. After several rounds of feedback and subsequent refinements to the questionnaire, both research experts expressed their unanimous agreement that the instrument met all the specified criteria for face and content validity. This collective validation process significantly enhances the credibility and appropriateness of the questionnaire for capturing accurate and meaningful data in the context of the self-conducted research.

3.4.3 Pilot Study

The pilot study's purpose was to test the intra-rater reliability and validity of the questionnaire using the test-retest reliability method. This critical phase enabled the researcher to become more familiar with and refine the data collection tool and the data analysis process. Once the questionnaire had been developed, it was sent to 10% of the sample size, as recommended by Lewis and colleagues (2018). Participants other than those in the main study who met the same inclusion criteria were included in the pilot study. The sample size also included professionals in the academia sector with expertise in qualitative studies. It was also made up of randomly selected educators (who met the same inclusion criteria) that the researcher knew to assess the data collection process. The participants provided valuable insights and constructive criticism. This feedback was instrumental in uncovering flaws in the questionnaire and refining the questions for clarity, ambiguity, and appropriateness. Their expertise was particularly beneficial in assessing the efficacy of the questionnaire, identifying areas that required improvement, and ensuring that the questions aligned with the study's objectives and the field of education.

The professionals engaged in the pilot study played a pivotal role in suggesting minor revisions to the questionnaire. These individuals could comment and provide constructive criticism during the pilot testing—the changes aimed at enhancing the researcher's ability to extract the desired depth of information. Through iterative

feedback loops, the questionnaire underwent refinements, ensuring that it evolved to its optimal state. This iterative process improved the instrument's overall quality and contributed to its reliability and validity, setting a robust foundation for the main study; this ensured that all the flaws were uncovered. Lastly, the pilot study ensured that the language level was appropriate for the targeted participants. Once the pilot study process was conducted, the primary study process commenced. One crucial aspect addressed during the pilot study was the appropriateness of language level for the targeted participants. Professionals involved in the pilot testing provided feedback on the questionnaire's clarity, ensuring that it resonated with the intended audience. This process contributed to refining the language, making it more accessible and comprehensible for the study's participants.

3.5 Data Collection Procedure

3.5.1 Main Study

An information leaflet, Appendix F, and a gatekeeper's letter, Appendix D and Appendix E, were sent to the varying institutions. Once the signed gatekeeper's letter was received, the researcher asked the administrators at the institutions to distribute an email, Appendix B, about the study through their academic mailing/distribution list. This email invited educators to participate in the study. The invitation to participate in the study included the project's title, a short paragraph explaining the research focus, the researchers' names and contact details, and the link to the questionnaire, including the Letter to the Participants, Appendix G. Educators who volunteered to participate were requested to consent online before completing the once-off online questionnaire, Appendix K. The questionnaire took 15 - 20 minutes to complete. Volunteers were asked to complete the questionnaire within two weeks after receiving the initial email. One week after the initial email was sent, a reminder email was sent to educators who had not responded to the first email. Data was collected from November 2022 to February 2023.

3.6 Holistic Normative Model for Future Private High School Educators' Employee Wellness Programmes

The construction of this normative model is informed by the findings of this study, ensuring its relevance and effectiveness in addressing the wellness needs of educators in private high schools in South Africa. This model integrates insights from both the quantitative and qualitative data collected, providing a comprehensive framework tailored to the unique context of private high school educators.

To ensure the model's robustness, it draws upon the principles of General Systems Theory, which emphasises the interrelatedness of various components within an organisation (Gie, 2017). By viewing the school environment as a complex system where different elements interact, the model can address wellness in a holistic manner, considering factors such as physical health, mental wellbeing, organisational culture, and external influences.

Furthermore, the model leverages Gie's (2017) Holistic Employee Wellness Programme (HEWP) normative model for educators from South Africa's tertiary sector, adapting its core concepts to fit the private high school setting. Gie's model, which has been successful in addressing the wellness needs of tertiary educators, provides a valuable foundation. By modifying it to suit the specific challenges and requirements of high school educators, this study ensures that the proposed model is both practical and contextually appropriate.

The proposed normative model for the HEWP consists of three phases, with a feedback loop at the conclusion of the third phase, Figure 12.

- **Phase One** investigates the inputs and the causes and effects contributing to burnout, job dissatisfaction, and high staff turnover among educators in this sector.
- **Phase Two** includes the necessary assessments and interventions for establishing the HEWP.
- **Phase Three** evaluates whether the HEWP has produced the anticipated outcomes, incorporating follow-up assessments to measure effectiveness.

3.7 Ethical Considerations

The protocol was submitted to the Human Research Ethics Committee (HREC) of Rhodes University for approval with the following tracking number: (2022-5851-7282), Appendix A. The first page of the online questionnaire required volunteers to select the agreement option on the consent form to allow them to participate in the study, Appendix G. This consent form ensured that participation was voluntary and that participants were permitted to withdraw from the study at any point, irrespective of any external influences placed on them. Once consent was obtained, the educators were able to complete the questionnaire.

Additionally, an information leaflet inviting staff members to participate in this study was distributed to staff members via electronic mail and outlined the purposes of the research and what participants would be expected to do, Appendix F. A copy of the research findings was made available to the Human Resources (HR) department/employee responsible for the EWP, should there already be an existing programme at the institution. All information was treated as confidential. Questionnaire responses were kept on the researcher's desktop, and only the researcher and the research supervisors could access the data files. The anonymity of participants was maintained by assigning a number to each selected participant.

3.8 Data Analysis

3.8.1 Descriptive Analysis

The data was analysed initially through means of descriptive statistical methods. Tables, figures, frequencies, and percentages were used to descriptively analyse and display categorical parameters. Responses were categorised into common themes using frequencies and percentages for the open-ended questions. Braun and Clark (2006) outlined a six-step guideline used for thematic analysis, which was used in this study. Step one states that one should familiarise themselves with the data by reading and taking notes for general ideas and understanding. This is followed by step two, which systematically generates initial codes according to the data set's common interests or related features. Step three is that from the initial codes generated in step two, one could use them to search for significant themes.

Step four was to review the major themes by thematic mapping. This ensured the initial codes generated in the second step worked within the highlighted major themes. After cross-referencing these codes, the fifth step was to define and name the major themes specific to the initial codes which fell within the specific themes. The final step was to produce a report of the collated codes under the major themes into tables using examples and direct quotations in the data set.

Therefore, using similarity codes and Braun and Clark's six-step guideline for thematic analysis, participants' responses were placed into common themes. For example, participants who reported that their understanding of EWP is used to promote/increase levels of physical fitness fell under a common theme of physical fitness. On the other hand, participants who reported that their understanding of EWP is to promote mental health fell under the common theme of mental health. This was supported with direct quotations from participant responses.

3.8.2 Statistical Analyses

3.8.2.1 Software Used

The statistical software R[®] was used for all data analysis, Appendix L.

3.8.2.2 Variable Classification

Upon visual inspection of the Q-Q plot, the probability distribution identified for perception, knowledge and attitude was a normal distribution.

3.8.2.3 Predictors/Independent Variables:

x_1 = Age [over 40, up to 40] (years)

x_2 = Sex [Male, Female, prefer not to disclose]

x_3 = Education [Other, postgraduate]

x_4 = Years employed [up to 10, over 10]

3.8.2.4 Response/Dependent variables:

Y_{i1} = Perceptions

Y_{i2} = Knowledge

Y_{i3} = Attitudes

The dependent variables were each modelled such that age, sex, education, and years employed as educators were predictors of each dependent variable. Analysis of Variance (ANOVA) was conducted to identify statistically significant differences between the independent variable categories regarding the relevant dependent variable.

3.8.3 Linear Regression Model

One regression model was constructed for each Likert-type and a few qualitative response items for perception, knowledge, and attitude.

3.8.3.1 The variables are coded below as:

$$x_{i1} = \text{Age} = \begin{cases} 0, & \text{if over 40} \\ 1, & \text{up to 40} \end{cases}$$

$$x_{i2} = \text{Sex} = \begin{cases} 0, & \text{if female} \\ 1, & \text{if male} \\ 2, & \text{prefer not to disclose} \end{cases}$$

$$x_{i3} = \text{Education} = \begin{cases} 0, & \text{if other} \\ 1, & \text{if postgrad} \end{cases}$$

$$x_{i4} = \text{Years employed} = \begin{cases} 0, & \text{if up to 10} \\ 1, & \text{if over 10} \end{cases}$$

The linear models are expressed as Equations 1 and 2,
 $Y_{i1} = \beta_0 + \beta_1 x_{i1} + \beta_2 x_{i2} + \beta_3 x_{i3} + \beta_4 x_{i4} + \beta_5 x_{i5} + \beta_6 x_{i6} + \beta_7 x_{i7} + \epsilon_i$

3.8.3.2 Assumptions of the model

- The dependent variable is continuous.
- The independent variables are categorical.
- The residuals are independent and normally distributed.

3.8.4 Model Diagnostics

3.8.4.1 Hypothesis Testing

A fixed effects Analysis of Variance (ANOVA) with no interactions was conducted for the four independent variables to analyse the linear regression model for predicting educators' perceptions, knowledge, and attitudes towards EWP. The F-statistic was used to test the hypothesis. An F value greater than 3.23 for each variable would indicate that the null hypothesis could be rejected at 5% significance. A fixed effects ANOVA with no interactions was conducted for the four independent variables to analyse the linear regression model for predicting access score. An F value greater than 3.21 for each variable would indicate that the null hypothesis could be rejected at 5% significance. Significant variables were further analysed using the Shapiro-Wilk normality test. The null hypothesis of Shapiro's test is that the population is distributed normally.

CHAPTER 4 | RESULTS

This thesis aimed to determine the perceptions, knowledge, and attitudes of educators towards employee wellness programmes. To fulfil this objective, a mixed-methods design was utilised. This chapter will firstly address the background and demographic results from this study. Thereafter, this chapter will unpack the knowledge and perceptions of the participants towards employee wellness programmes (EWP). Lastly, the results from the attitudes towards employee wellness programmes will be presented.

4.1 General Demographic

A total of 125 educators from 10 different private high schools in South Africa participated in the study, Table 3. Most (38%) were 51 years old and older, with the majority (n=29; 23%) in this age group being females, Table 3. From the total study sample, 71 (57%) were female participants, 52 (40%) were male participants, and two (1%) preferred not to disclose their sex.

4.1.1 Age and Sex

Table 3: An overview of the responders' demographic characteristics (number and percentage).

Age of participants (years)	Male participants (n)	Female participants (n)	Prefer not to say (n)
18 - 21	0 (0%)	0 (0%)	0 (0%)
22 - 25	0 (0%)	0 (0%)	0 (0%)
26 - 30	4 (3%)	7 (6%)	1 (1%)
31 - 35	8 (6%)	7 (6%)	1 (1%)
36 - 40	8 (6%)	17 (13%)	0 (0%)
41 - 50	5 (4%)	7 (6%)	0 (0%)
46 - 50	8 (6%)	4 (3%)	0 (0%)
51 years and above	19 (15%)	29 (23%)	0 (0%)

4.1.2 Highest Education Obtained.

There were 126 responses; the majority (n=52; 41.3%) obtained a Bachelor's degree, Table 4. Followed by 35 (27.8%) participants who indicated that they had an Honour's degree. Additionally, 17 (13.5%) had a Master's Degree, with 9 (7.1%) and 5 (4%) having a Diploma and PhD degree, respectively. Eight (6.3%) indicated they had a qualification not listed above.

Table 4: An overview of the highest education obtained.

Qualification	Total participants (n=126)
Post-doctoral Degree	0 (0.0%)
PhD Degree	5 (4.3%)
Other	8 (6.3%)
Diploma	9 (7.1%)
Master's Degree	17 (13.5%)
Honour's Degree	35 (27.8%)
Bachelor's Degree	52 (41.3%)

4.1.3 Years Employed as an Educator.

Out of the 125 responders, most of them (n=95; 76%) indicated that they had been employed as an educator for more than ten years, Table 5. Additionally, nine (7.2%) and seven (5.6%) had been employed as an educator for between seven and eight years and further between nine to 10 years, respectively. Only one (0.8%) participant had taught for between one to two years, with four (3.2%) indicating less than a year's teaching experience.

Table 5: An overview of the years employed as an educator.

Years employed as an educator	Total participants (n=125)
Less than one year	4 (3.2%)
1 – 2	1 (0.8%)
3 – 4	4 (3.2%)

5 – 6	5 (4.0%)
7 – 8	9 (7.2%)
9 – 10	7 (5.6%)
More than 10 years	95 (76.0%)

4.1.4 Grades Currently Taught.

Four hundred and thirty-two responses were recorded for the different grades taught, Table 6. Most (n=92; 73%) indicated that they taught grade ten students, with only thirteen (10.3%) educators indicating that teaching was not part of their schedule. Eighty-eight (69.8%) and 76 (60.3%) participants taught grade 12 and 9 learners, respectively. Lastly, 79 (62.7%) and 84 (66.7%) responders taught grade 8 and 11 students.

Table 6: An overview of the grades taught (number and percentage) by the respondents.

Grades/Forms	Total participants (n=126)
8/I	79 (62.7%)
9/II	76 (60.3%)
10/III	92 (73.0%)
11/IV	84 (66.7%)
12/V	88 (69.8%)

4.1.5 Subjects Taught

Of the 163 responses for subjects taught, the majority (n=36; 28.6%) taught a Language subject, which was followed by 28 (22.2%) educators who taught an Art subject Table 7. Engineering Graphic and Design and Physical Education had two (1.6%) responders. Lastly, only one (0.8%) educator taught Robotics and one (0.8%) taught Hospitality studies.

Table 7: Frequency of the various subjects educators teach in private high schools.

Subjects	Total (n=126)
Languages (English/Afrikaans/isiXhosa/Tshivenda/French)	36 (28.6%)
Arts (Music/Drama/Visual Arts/Fine Arts/Dance)	28 (22.2%)
Mathematics/Mathematics Literacy	23 (18.3%)
Accounting/EMS/Business Studies/Management/Economics	18 (14.3%)
Science (Life Science/Biology/Physical Science/Chemistry)	16 (12.7%)
Life Orientation	16 (12.7%)
IT/Computer Application Technology	7 (5.5%)
History	8 (6.3%)
Geography	3 (2.3%)
Engineering and Graphic Design (EGD)	2 (1.6%)
Physical Education (PE)	2 (1.6%)
N/A	2 (1.6%)
Robotics	1 (0.8%)
Food Technology / Hospitality Studies	1 (0.8%)

4.1.6 Classes Taught Per Week.

Thirty-four (27%) educators (of 126 respondents) indicated that they taught between 16 to 20 lessons per week, which was followed by 29 (23%) educators who taught between 21 to 25 classes per week, Table 8.

Table 8: An overview of the number of lessons taught per week by educators.

Number of lessons taught per week	Total participants (n=126)
1 - 5	12 (9.5%)

6 – 10	11 (8.7%)
11 – 15	9 (7.1%)
16 – 20	34 (27.0%)
21 - 25	29 (23.2%)
26 - 30	13 (10.3%)
31 – 35	7 (5.6%)
36 – 40	3 (2.4%)
41 – 45	3 (2.4%)
46 – 50	0 (0.0%)
N/A	5 (4.3%)

4.1.7 Hours Per Day Educators Spend at Work (Excluding Lunch Breaks and Any Extra Mural Activities).

Of the 126 respondents, the majority (n=72; 57.1%) reported spending between eight to nine hours a day at work, Table 9. This was followed by 23 (18.3%) participants who spent an average of six to seven hours at work. Additionally, the highest amount of time (12 hours) was indicated by nine (7.1%) participants. Lastly, only three (2.4%) educators indicated that they spend, on average, between four to five hours a day at work.

Table 9: An overview of the average daily hours spent at work (excluding lunch break and any extramural activities).

Average hours per day spent at work (excluding lunch breaks and extramural activities)	Total participants (n=126)
Less than an hour	0 (0.0%)
2 – 3	0 (0.0%)
4 – 5	3 (2.4%)
6 – 7	23 (18.3%)
8 – 9	72 (57.1%)

10 – 11	19 (15.1%)
More than 12	9 (7.1%)

4.1.8 Average Hours Per Day Spent at Extramural Activities.

Most of the educators (n=68; 54%) out of the 126 responses stated that they spent, on average, between two to three hours per day on their extramural activity, Table 10. Twelve (9.5%) responders indicated they do not have an extramural activity. In comparison, two (1.6%) indicated that they spend between six to seven hours and 10 to 11 hours a day, on average, at their extramural activity, respectively.

Table 10: An overview of the average hours educators spend at their extramural activity.

Average hours per day, spent at extramural activities	Total participants (n=126)
I do not have any extramural activities	12 (9.5%)
Less than an hour	34 (27.2%)
2 – 3	68 (54.1%)
4 – 5	7 (5.6%)
6 – 7	2 (1.6%)
8 – 9	1 (0.8%)
10 – 11	2 (1.6%)

4.1.9 Average Number of Times Educators Work Overtime (Time Worked in Addition to One's Regular Working Hours) Per Week.

There were 126 responses logged, and seven (5.6%) responders indicated that they never worked overtime. In contrast, 30 (23.8%) indicated that they spend every day per week working overtime, and another 30 (23.8%) worked, on average, three to four times overtime, Table 11. Lastly, 40 (31.7%) and 19 (15.1%) of participants indicated that they, on average, worked between one to two times and five to six times overtime.

Table 11: An overview of the average time educators work overtime per week.

Average times per week, educators spend working overtime	Total participants (n=126)
Never	7 (5.6%)
1 – 2	40 (31.7%)
3 – 4	30 (23.8%)
5 – 6	19 (15.1%)
Everyday	30 (23.8%)

4.1.10 The Average Amount of Hours Educators Spend Working Overtime (Time Worked in Addition to One’s Regular Working Hours) Per Day.

Four (3.2%) of the 126 responses indicated that they, on average, worked more than 8 hours per day overtime, with seven (5.6%) of them indicating that they never worked overtime, Table 12. Additionally, the majority (n=55; 43.7%) spend, on average, between one to two hours per day working overtime, followed by 43 (34.1%) spending between three to four hours per day working overtime. Lastly, 10 (7.9%) and seven (5.6%) participants worked, on average, less than an hour and between five and six hours per day overtime, respectively.

Table 12: An overview of the average hours educators work overtime daily.

Average hours per day, educators spend working overtime	Total participants (n=126)
Never	7 (5.6%)
Less than 1 hour	10 (7.9%)
1 – 2	55 (43.7%)
3 – 4	43 (34.1%)
5 – 6	7 (5.6%)
7 - 8	0 (0.0%)
More than 8 hours	4 (3.2%)

4.1.11 Educators Compensated/Incentivised for Working Overtime (Time Worked in Addition to One's Regular Working Hours)

There were 126 responses logged for this question. One hundred and nineteen (94%) educators stated that they do not get incentivised/compensated for working overtime, and seven (5.6%) educators stated that they do get compensated/incentivised when they work overtime.

4.2 Perception and Knowledge of Employee Wellness Programmes

There was no significance ($p > 0.05$; $F < 3.2$) observed between the independent predictors (age, sex, education obtained, years of employment) and respondents for the other knowledge and perception responses.

4.2.1 Reported Ratings of Knowledge of Employee Wellness Programmes.

From the 126 responses, the question with the highest mean score on the Likert scale (3.9 ± 1.0) was "The use of services provided by wellness programmes can help improve employee health and increase worker productivity." On average, participants were "Neutral/Undecided" or "Agreed" to this question, which was graded as "Intermediate" to "Good" knowledge, Table 13. The question with the lowest mean score (2.3 ± 0.8) was "Does your place of employment have an existing employee wellness programme or host employee wellness activities?" On average, participants stated "I'm not sure" or "Yes", which was graded as "Intermediate" for perceived knowledge. The other questions' mean response scores all fell within the "Intermediate" to "Good" grade for perceived knowledge. There was no statistical significance between participants who are over 40 years old and under 40 years old for questions related to knowledge and perception of employee wellness programmes ($p = .73; .25; .15; .80; .13$)

Table 13: Scores and grades for questions about knowledge and perceptions employee wellness programmes

Questions	Mean score and grading of all participants
The use of services provided by wellness programmes can help improve employee health and increase worker productivity.	3.9 ± 1.0 “Neutral” – “Agree”
The workplace can be a valuable source of information on employee health and wellbeing.	3.5 ± 0.7 “Neutral” – “Agree”
How often do you participate in employee wellness activities?	2.7 ± 1.1 “Rarely” – “Sometimes”
Have you ever received information regarding employee wellness from your place of employment?	2.5 ± 0.7 “I’m not sure” – “Yes”
How would you rate your knowledge of employee wellness programmes?	2.3 ± 1.0 “Fair” – “Good”
Does the place of employment have an existing employee wellness programme or host employee wellness activities?	2.3 ± 0.8 “I’m not sure” – “Yes”

All variables have F values less than 3.23 and p-values greater than 0.05, indicating that none of the variables are significant predictors of whether responders rated their knowledge as either knowledgeable or had low knowledge at 5% significance. Therefore, we fail to reject the null hypothesis at 5% significance. To account for this decrease in power, the significance was increased to 10%, and significant predictors were identified for further analysis. Educators who had obtained a postgraduate education were significantly ($p < 0.1$, $F < 3.23$) more likely to have a higher and better rating for their perception and knowledge of employee wellness programmes, Table 14.

Table 14: Fixed effects linear regression model output testing for significance among four independent predictors of how educators rate their knowledge of employee wellness programmes.

Source of variance	df	Sum Sq	Mean Sq	F value	Pr (>F)
Age	1	0.5	0.5	0.5	0.5
Sex	1	0.7	0.7	0.7	0.4
Highest education obtained	1	3.6	3.6	3.6	0.1 **
Years employed as an educator	1	0.8	0.8	0.8	0.4

Significance code: * < 0.05 < ** < 0.1

4.2.2 Description of Understanding (Definition) of An Employee Wellness Programme

The majority (n=25; 19.8%) of the responders of the 114 responses logged understood employee wellness programmes to improve job satisfaction, motivation and reduction of stress related to the specific job, Table 15. This was followed by twenty-four (19%) educators who defined employee wellness programmes as improving psychological, mental and/or emotional wellbeing. Lastly, eight (6.3%) participants had either not heard of employee wellness programmes or had no idea as to what the definition of these programmes is before completing the questionnaire.

Table 15: Common themes of understanding (definition) of an employee wellness programme.

Common themes of understanding (definition) of an employee wellness programme	Examples of direct quotations	Number of claims (n=126)
“Job satisfaction/job-related stress management”	<p>“A programme to assist with stress management, etc.”</p> <p>“Promote knowledge of how to avoid stress or workplace injuries.”</p>	25 (19.8%)
“Psychological and mental and emotional health”	<p>“Meeting the psychological needs of teaching staff.”</p> <p>“Improve mental and emotional health.”</p>	24 (19.0%)
Increase/Improve/Support mental and/or emotional wellbeing.		
“Physical and mental health”	<p>“A system devised to promote mental and physical health.”</p> <p>“Being looked after mentally and physically by the organisation.”</p>	21 (16.7%)
Increase/Improve/Support fitness and mental/emotional health.		
“General and overall health/wellbeing”	<p>“Looking after the emotional and social wellbeing of employees.”</p> <p>“Programme to improve the general wellbeing of employees.”</p>	17 (13.5%)
Improve all aspects of wellbeing.		
“I do not know.”	<p>“Have not heard of this prior to the survey.”</p> <p>“No idea”</p>	8 (6.3%)

“Physical fitness/health”		
Increase/Improve/Support fitness level.	“A programme designed to improve employees' mental and physical health.”	7 (5.6%)
“Healthy and safe working environments”	“Betterment and enhancement of worker in their environment.”	4 (3.2%)
“Free-time”		
Increase free time/off-days.	“Time off, decreased workload.” “Allowing for free time.”	3 (2.4%)
“Professional behaviour”		
Improve and support behaviour.	“Courses looking at positive personal and professional behaviour.”	2 (1.6%)
Financial assistance		
Assist financial decisions.	“Therapy and financial help.” “Ensuring all employees are valued and cared for financially.”	2 (1.6%)
No comment/response	N/A	13 (10.3%)

4.2.3 *The Benefits of an Employee Wellness Programme*

Regarding the various benefits of an employee wellness programme, the educators logged 611 responses, Table 16. One hundred and eighteen (93.7%) participants reported that they think that employee wellness programmes improve employees' general health and wellbeing. In comparison, three (2.4%) participants said they believe no benefits are associated with employee wellness programmes.

Table 16: Frequency of the benefits of an employee wellness programme by all participants.

Benefits of an employee wellness programme	Total (n=126)
Improves employees' general health and wellbeing	118 (93.7%)
Improves employees' performance	96 (76.2%)
Improves employee productivity and efficiency	94 (74.6%)
Improves employees' job satisfaction	92 (73.0%)
Improves organisational performance	74 (58.7%)
Improves employees' engagement (decrease presenteeism)	69 (54.8%)
Reduces workplace non-attendance (absenteeism)	65 (51.6%)
There are no benefits associated with employee wellness programmes	3 (2.4%)

4.2.4 Employee Wellness Programmes in the Education Sector Should Consider and Address the Following Topics.

Regarding the various topics an employee wellness programme in the education sector should include, the educators logged a total of 524 responses, Table 17. One hundred and twelve (88.9%) participants stated that an employee wellness programme in the education sector should include the topic of emotional wellness. Another 95 (71.4%) educators noted that an employee wellness programme in the education sector should include occupational wellness. Only 17 (13.5%) participants stated that an employee wellness programme in the education sector should include topics dependent on the employees' needs and demands from the institution.

Table 17: Frequency of the various topics an employee wellness programme in the education sector should include.

Topics an employee wellness programme in the education sector should include	Total (n=126)
Emotional wellness	112 (88.9%)
Occupational wellness	95 (75.4%)
Physical wellness	90 (71.4%)
Social wellness	81 (64.3%)
Intellectual wellness	79 (62.7%)
Spiritual wellness	50 (29.7%)
It depends on the institution	17 (13.5%)

Female educators were significantly ($p < 0.05$, $F < 3.21$) more likely to rate their perception and knowledge that the workplace could be a valuable source of information on employee health and wellbeing, Table 18.

Table 18: The fixed effects linear regression model output testing for significance among four independent predictors of how educators' perception and knowledge of whether the workplace can be a valuable source of information on employee health and wellbeing.

Source of variance	df	Sum Sq	Mean Sq	F value	Pr (>F)
Age	1	2.2	2.2	2.7	0.1
Sex	1	4.5	4.5	5.3	0.0 *
Highest education obtained	1	0.6	0.6	0.7	0.4
Years employed as an educator	1	1.4	1.4	1.7	0.2

Significance code: * < 0.05

4.3 Reported Attitude of Employee Wellness Programmes

There was no significance ($p > 0.05$; $F < 3.2$) observed between the independent predictors (age, sex, education obtained, years of employment) and respondents for the other attitudes responses. However, educators with greater than 10 years of experience were significantly ($p < 0.05$, $F > 3.21$) more likely to participate in employee wellness programmes than those with less than 10 years of experience, Table 19.

Table 19: The fixed effects linear regression model output testing for significance among four independent predictors of how often educators with employee wellness programmes, at the place of employment, participated in employee wellness activities.

Source of variance	df	Sum Sq	Mean Sq	F value	Pr (>F)
Age	1	2.9	2.9	2.7	0.1
Sex	1	0.3	0.3	0.3	0.6
Highest education obtained	1	0.0	0.0	0.0	1.0
Years employed as an educator	1	5.9	5.9	5.5	0.0 *

Significance code: * < 0.05

Regarding educators' attitude towards employee wellness programmes, the questions with the highest mean score on the Likert scale (3.5 ± 0.7) was "I am benefiting from the services of an employee wellness programme", "I would benefit from an employee wellness, should it be implemented", "There is an advantage in knowing one's health status", "Stigmas prevent employees from seeking counselling, testing and treatment that can be provided as part of an employee wellness programme." On average, educators were "Neutral" or "Agreed" with the statements, Table 20. The question with the lowest mean score (2.5 ± 2.1) was "It is important to attend seminars and forums and access internet information about employee wellness". On average, educators "Disagreed" or were "Neutral". The mean responses for participants' attitudes towards employee wellness programmes fell within the "Intermediate" to "Agreed" attitude. There was no statistical significance between participants under 40 and over 40 for the questions that reported participants' attitudes toward employee wellness programmes ($p = .75$; $.26$; $.56$; $.93$; $.95$; $.06$)

Table 20: Mean scores and grades for questions related to the attitude towards employee wellness programmes.

Questions	Mean score and grading of all participants
I am benefiting from the services and activities of an employee wellness programme.	3.5 ± 0.7 “Neutral” – “Agree”
I would benefit from an employee wellness programme, should it be implemented.	3.5 ± 0.7 “Neutral” – “Agree”
There is an advantage in knowing one’s health status	3.5 ± 0.7 “Neutral” – “Agree”
Stigmas prevent employees from seeking counselling, testing and treatment that can be provided as part of an employee wellness programme	3.5 ± 0.7 “Neutral” – “Agree”
It is important to attend seminars and forums and access internet information about employee wellness	2.5 ± 2.1 “Disagree” - “Neutral”
I will engage in employee wellness programme activities and services should they be implemented at my place of employment	2.5 ± 0.7 “I’m not sure” – “Yes”

Educators who were younger than the age of 41 years were significantly ($p < 0.05$, $F < 3.21$) more likely to believe stigmas prevent participants from seeking counselling, testing and treatment that can be provided as part of an employee wellness programme, Table 21.

Table 21: The fixed effects linear regression model output testing for significance among four independent predictors of educators' attitudes towards stigmas preventing employees from seeking counselling, testing and treatment that can be provided as part of an employee wellness programme.

Source of variance	df	Sum Sq	Mean Sq	F value	Pr (>F)
Age	1	3.2	3.2	3.3	0.1 *
Sex	1	0.0	0.0	0.0	0.9
Highest education obtained	1	1.2	1.2	1.2	0.3
Years employed as an educator	1	0.0	0.0	0.0	1.0

Significance code: * < 0.05

4.3.1 Employee Wellness Programme Activities

Regarding the various activities an employee wellness programme in the education sector should include that educators would engage in; educators logged a total of 285 responses, Table 22. Seventy-seven (61.1%) educators said they would engage in professional and confidential counselling. Twelve (9.5%) educators stated that they would not engage in any of the above-mentioned activities.

Table 22: An overview of the activities of an employee wellness programme educators would engage in.

Activities of an employee wellness programme	Total (n=126)
Professional and confidential counselling	77 (61.1%)
Recreational activities	73 (57.9%)
Physical health risk assessments	63 (50%)
Critical incident and trauma support	47 (37.3%)
HIV/AIDS and chronic disease management education	13 (10.3%)
None of the above	12 (9.5%)

4.3.2 *Barriers that Would Prevent Educators from Participating in Wellness Activities.*

Educators logged 245 responses as to the barrier preventing them from participating in wellness activities set out by an employee wellness programme, Table 23. The majority (n=78; 64.5%) of them indicated that an inconvenient time or location would be a barrier. Additionally, 29 (24%), 24 (19.8%) and 21 (17.4%) indicated that privacy concerns such as employees knowing about their health and that their employer should not be involved in their personal health and job duties would prevent them from participating in wellness activities, respectively. Lastly, eight (6.6%) responders indicated they would not participate in wellness activities because they were just uninterested.

Table 23: The frequency of barriers preventing educators from participating in wellness activities.

Barriers that would prevent educators from participating in wellness activities.	Total (n=126)
Inconvenient time or location	78 (64.5%)
I have no time	47 (38.8%)
I'm concerned about other employees knowing about my health (privacy)	29 (24.0%)
My employer should not be involved in my personal health (privacy)	24 (19.8%)
My job duties do not allow me to participate	21 (17.4%)
Other	14 (11.6%)
Just not interested	8 (6.6%)

4.4 Summary

Results from this study demonstrated that the majority of the participants in this study were 51 years and above (38%) and the majority of these participants had been employed for more than ten years as an educator (76%) and had a bachelor's degree (41.3%). Highest education obtained significantly influenced how educators rated their knowledge of employee wellness programme: demonstrating that employees with a higher level of education were more likely to have a higher and better rating for their perception and knowledge of employee wellness programmes.

Sex was a source of variance from this study which showed that female educators were more likely to rate their perception and knowledge that they thought that the workplace could be a valuable source of information on employee health and wellbeing. Educators' attitude toward employee wellness programmes was further influenced by the number of years educators were employed: educators with more than ten years of experience were likely to participate in employee wellness programmes. Younger employees (younger than the age of 41 years) had the attitude that stigmas associated with a lack of healthy wellbeing prevent employees from seeking counselling, testing and treatment.

CHAPTER 5 | DISCUSSION

The purpose of this chapter is to discuss the results obtained from the constructed questionnaire used in this study. Furthermore, this chapter aims to contextualise the results within the broader framework of the study's aims and objectives. This chapter has been divided according to the questionnaire subheadings and results.

5.1.1 General Age Demographic

This study found that most participants were over 30 years old; the majority being in the 51 years and above age category. The findings from this study aligned with Rees and Breen's (2017) findings, which found that older employees were more likely to participate in wellness programmes. Moreover, this may be a result of the age decline phenomenon. Age decline phenomenon states that there is a decline in the immune system, and some organs may lose some of their cells, meaning individuals may be prone to getting sick more often (Wang et al., 2011). Population in most low- and middle-income countries, like South Africa, is ageing rapidly (Solanki et al., 2019). This is problematic as this is an established risk factor for developing multiple chronic diseases such as cardiovascular disease, cancers, diabetes, and respiratory disease (Solanki et al., 2019; WHO, 2023). As a result, the older population may deem EWP as relevant and essential in their lives due to their decline in health at this age, as viewed in this study.

Additionally, older educators may be interested in finding ways to improve their health. In contrast, this may not be an area of interest for the younger population, hence the lack of participation from the younger educators. Another reason for the age disparity found in this study could be attributed to the demographic distribution of educators in South Africa (Research on Socio-Economic Policy [RESEP], 2022). The demographic distribution of educators demonstrated that most educators in South Africa are between 40 – 60 years gap. Given the combination of the decline in health for the older population, the quadruple burden of disease that affects the South African population, and the high exposure to stressors in this field, there is an imminent need for effective wellness programmes and tools in the education system in South Africa.

5.1.2 Educators' Workload and Overtime

The study showed that the majority of educators (27%) taught between 16 and 20 weekly classes, with 79% of them staying at work for over eight hours per day. Furthermore, this emphasised various researchers' notions who have stated that private high school educators spend a significant amount of time at work exposed to various stressors (Vazi, 2013; Agyapong et al., 2022, Tsubono and Mitoku, 2023). Moreover, the study revealed that the majority of educators (54.1%) dedicate an extra two to three hours daily to their extramural activities, with 63% spending between two to 11 hours daily beyond their classroom teaching hours. Exposure to high demands and workloads over a period may affect educators' overall health and wellbeing and may lead to a poor work-life balance (Rahmani et al., 2017; Agyapong et al., 2022; Tsubono and Mitoku, 2023).

This finding further highlights the need for EWP for educators in private secondary schools in South Africa. Furthermore, the study revealed that 94.4% of the participants spend, on average, a minimum of one day per week working overtime and 23.8% of these educators stated that they work overtime every day of the working week (Monday to Friday). Once more, this underscores the extensive hours these professionals spend at work, subjecting them to constant stressors that elevate the risk of burnout, job dissatisfaction, depression, and anxiety, all prevalent issues among South African educators (Pons and Daele, 2016; Wong et al., 2019). Multiple studies have established a link between extended working hours and depression and anxiety (Amagasa and Nakayama, 2013; Kim et al., 2016; Afonso et al., 2017; Ogawa et al., 2018). Working beyond 34 hours weekly, which has been identified in majority of the educators in this study, heightened the likelihood of encountering depression and anxiety (Wong et al., 2019). In a recent study by Ogawa et al. (2018), the impacts of extended work hours on depressive symptoms were explored. It was discovered that individuals working over 60 hours weekly faced a significantly heightened risk of depression (Ogawa et al., 2018). This finding, paired with the extent of overtime educators work, is concerning and further emphasises the risk that high school educators are facing.

Additionally, too much overtime may exhaust employees' efforts (Mahmood et al., 2019). This may further affect their health, and safety, while decreasing their

productivity and performance (Mahmood et al., 2019). When examining the South African population and the primary causes of death related to NCDs, it is crucial to explore the risks, disadvantages and potential impact of extended working hours on these key NCDs. Various studies have investigated the effects of long working hours on the occurrence of cardiovascular diseases (CVD) and cerebrovascular diseases (Kang et al., 2012; Virtanen et al., 2012; Kivimaki et al., 2015). Studies suggest that employees working less than seven hours per day or more than 11 hours per day are at greater risk of experiencing myocardial infarction (Wong et al., 2019). Research also indicates that employees who work more than 50 hours per week have an increased risk of cerebrocardiovascular diseases, myocardial infarction, and coronary heart disease (Kang et al., 2012; Wong et al., 2019).

The combination of the prevalence of employees experiencing cardiovascular diseases due to long working hours and the high death rates due to CVDs in South Africa, Figure 1, is a concern. This finding underscores the significant risk that private high school educators in South Africa face, potentially leading to CVD and death. Diabetes is one of the other diseases shown to be related to long working hours (Wong et al., 2019). Lastly, extended working hours, as seen in this study, have been associated with diabetes mellitus, a condition that may prompt individuals to modify their dietary habits due to the demands of long workdays (Sami, 2017; Wong et al., 2019; Min et al., 2022). Once more, the prevalence of diabetes as a leading NCD contributing to mortality in South Africa underscores the risk faced by educators. This further emphasises the urgent necessity for wellness programmes tailored specifically to South African private high school educators' needs.

5.1.3 Educators' Work-Life Balance

Given the amount of extra time educators in private high schools spend working, work-life balance is crucial. As mentioned, educators often face high levels of stress due to the demanding nature of their profession (Vazi, 2013; Agyapong et al., 2022). Research has consistently demonstrated the critical role of work-life balance in overall wellbeing (Franco et al., 2021). For instance, after accounting for socioeconomic factors, Shams and Kadow (2019) found a significant positive relationship between good work-life balance and wellbeing among employees in Pakistan. Similarly, in the United Arab Emirates, Wei and Ye (2022) observed a positive correlation between

work-life balance and the wellbeing of teachers. The blurring of boundaries between work and personal life, time constraints, reduced leisure time, emotional strain, and cumulative job demands further exacerbate work-life imbalance among college educators (Smith et al., 2020).

Furthermore, balancing lesson planning, grading, administrative tasks, and extracurricular responsibilities can lead to a work-life imbalance, contributing to feelings of overwhelm and anxiety (Qin, 2024). Neglecting personal relationships and leisure activities due to work commitments can strain relationships with family and friends (Wei and Ye, 2022). Educators may find it challenging to maintain a healthy work-life balance, leading to feelings of guilt, resentment, and isolation (Wei and Ye, 2022). As a result, strained relationships outside of work can exacerbate stress and contribute to overall dissatisfaction with life (Wei and Ye, 2022).

Educators in the private secondary schooling system may often be promoted to boarding house masters. This role requires educators to live and be on the school campus 24 hours and are only permitted to leave the school premises when not on duty. Achieving a healthy work-life balance may become increasingly challenging, especially for educators who are tasked with this demanding responsibility. Continuous overwork and the inability to disconnect from job-related responsibilities can increase the risk of burnout among educators (Leah et al., 2021). Burnout not only affects educators' quality of life but also negatively impacts student learning outcomes (Qin, 2024). Conversely, poor work-life balance among educators can have profound health consequences, spanning from emotional exhaustion to cardiovascular issues (Agyapong et al., 2022). Prolonged work hours contribute to sedentary lifestyles, unhealthy eating habits, and insufficient sleep, elevating the risk of obesity, heart disease, and diabetes (Wong et al., 2019). Furthermore, chronic stress can exacerbate anxiety, depression, and other mental health disorders, further compromising educators' overall health and wellbeing (Wong et al., 2019). Additionally, the COVID-19 pandemic has exacerbated work-life imbalance by altering work roles, increasing workloads, and disrupting personal routines (Smith et al., 2020).

Addressing this issue extends beyond the scope of a wellness programme alone. While EWP are instrumental in supporting employees and raising awareness about the importance of work-life balance, the broader organisational culture plays a

significant role in resolving this matter. For instance, if wellness programmes consistently encourage educators to enhance their work-life balance but simultaneously face excessive work demands, it creates a paradox. Therefore, wellness programmes should focus on educating management and departmental heads to prevent educators from continually facing overwhelming workloads.

5.1.4 Perceived Low Salaries in South Africa's Education System

Findings from this study revealed that only 5.6% of educators are being compensated/incentivised for working overtime. Furthermore, the findings of this study align with existing literature indicating a prevalent issue among South African educators: low salaries and lack of compensation for overtime work (Van Heerden et al., 2023). This further emphasises researchers' findings on why educators resort to informal work arrangements to make more money (Van Heerden et al., 2023). Additionally, there are various factors contributing to this prevalence such as insufficient funding allocated to private educational institutions, disparities in salary structures compared to public schools, and challenges in negotiating higher salaries within the private education sector (Mngomezulu et al., 2017). Additionally, economic constraints and budgetary limitations within private schools may contribute to the inability to offer competitive salaries to educators (Mngomezulu et al., 2017). Educators working overtime indicates the significant job demands they face, especially if they are unable to fulfil their work duties within regular working hours.

In the context of the private secondary schooling system in South Africa, educators face several risks due to low salaries. Firstly, low salaries can lead to financial strain, making it challenging for educators to meet their basic needs, such as housing, healthcare, and transportation (Sano et al., 2021). This financial pressure can contribute to educators' stress and anxiety impacting their wellbeing (Agyapong et al., 2022). Secondly, low salaries may lead to job dissatisfaction and demotivation among educators (Kumar, 2019). When educators feel undervalued and underpaid for their work, they may become disengaged and less motivated to perform their duties effectively (Kumar, 2019). This can negatively impact the quality of education provided to students and hinder academic outcomes (Kumar, 2019).

Additionally, low salaries may result in difficulties attracting and retaining qualified educators (See et al., 2020). Educators may seek employment opportunities

elsewhere that offer better compensation and benefits, leading to high turnover rates within schools. This turnover can disrupt the continuity of education and create instability within the school environment (See et al., 2020). Furthermore, low salaries can perpetuate socio-economic inequalities within the education system (de Clercq, 2020). Educators from lower-income backgrounds may face greater financial hardships, exacerbating disparities in access to resources and opportunities for professional development (de Clercq, 2020). Overall, low salaries pose significant risks to educators in the private secondary schooling system in South Africa, impacting their financial stability, job satisfaction, retention rates, and the quality of education provided to students.

5.1.5 Perceptions and Knowledge of Employee Wellness and Wellbeing

Educators in this study had a broad understanding of EWP and their function. The identified themes ranged from EWP improving employees' organisational health/performance markers to improving employees' physical and mental health. These themes align with Rao's (2013) definition and function of these wellness programmes. However, none of the educators mentioned anything about wellness programmes assisting them in reducing their workload and assisting with work-life balance. This is something future policymakers and programme designers should consider. While implementing a wellness programme is a step in the right direction, reducing employee workload requires additional considerations. A comprehensive analysis is necessary, and management must be informed. This could indicate a broader systemic problem that demands resolution. Importantly, wellness programmes may not be able to assist educators in releasing them from their duties or freeing them from high workloads. However, these programmes may assist educators in dealing with the workload and stress and prevent them from burning out. Additionally, these programmes should be considered as support and reinforcements for educators to help them through the stress and workload.

5.1.6 Perceptions and Knowledge of Employee Wellness Programmes and Level of Education

Important insights from the section on knowledge and perceptions revealed that educators with postgraduate education were notably more inclined to rate their perception and understanding of EWP higher and more positively. South Africa's

diverse cultural landscape and socioeconomic disparities can influence educators' perceptions and knowledge of EWP (Teise and Alexander, 2017; Ntombela, 2019; Steenkamp, 2021). Educators with postgraduate education may have a broader understanding of the complex social, economic, and cultural factors that impact employee wellbeing in different communities and contexts (Steenkamp, 2021). Overall, in South Africa, educators with postgraduate education may possess advanced knowledge, skills, and resources that contribute to their enhanced perception and understanding of EWP within the unique challenges and opportunities of the country's education system (Ntombela, 2019). Interestingly, no participant rated their knowledge of EWP as excellent. Additionally, many participants in this study reported a good understanding of wellness programmes. Participants reported an “intermediate” or “good” understanding of the use of services provided by wellness programmes.

Respondents may have received information or exposure to EWP through their workplace, professional development programmes, or media channels. This awareness could have provided them with a foundational understanding of the concept and objectives of EWP, leading to a self-assessment of intermediate or good knowledge. Experienced educators, particularly those with years of tenure, have likely been exposed to diverse wellness initiatives or discussions within their educational environments (Steenkamp, 2021). Through their professional experience, they may have gained insights into the importance and components of EWP, contributing to their perceived knowledge level.

5.1.7 Knowledge of Employee Wellness Programmes at the Workplace

An important finding from this study indicated that most respondents had limited awareness regarding whether their school had an established EWP or conducted employee wellness activities. Educators who are informed and well-versed about EWP (such as those who indicated their awareness in this study) are typically expected to have knowledge of these programmes. However, participants were unaware of the existence and/or nonexistence of these programmes at their workplace. This indicates that these programmes are not being effectively utilised, as educators have not been informed about their existence, even when the programmes are already in place. According to Mattke et al. (2013), it is essential to communicate the programme's

aspects in an open method. Many wellness programmes have failed because of poor communication strategies (Mattke et al., 2013). Communication should emphasise the importance of better health for employee wellbeing (Mattke et al., 2013). The study's findings show that existing wellness activities for educators have not achieved this goal, indicating a need for improvements.

5.1.8 Perceptions and Knowledge of Employee Wellness Programmes as Valuable Sources of Information at the Workplace and Gender

Another noteworthy finding was that female educators were more inclined to view the workplace as a valuable source of information on employee health and wellbeing. This is like Wei and Ye's (2022) findings found that male college educators had significantly lower perceptions of wellbeing than female educators (Wei and Ye, 2022). This is mainly due to factors such as gender roles, empathy, professional networks, past experiences, leadership roles, cultural norms, and awareness (Sawadogo-Lewis et al., 2018). These likely explain why female educators were more willing to consider the workplace as a valuable source of information on employee health and wellbeing. Women may be socialised to be more attuned to health and wellbeing issues, both in their personal lives and in their professional roles (Sawadogo-Lewis et al., 2018).

They may place greater importance on topics related to wellness and seek out information and resources to support their own and others' wellbeing (Sawadogo-Lewis et al., 2018). Female educators, who often serve as nurturing figures in educational settings, may naturally gravitate towards topics related to health and wellbeing (Sawadogo-Lewis et al., 2018). They may be more empathetic towards their colleagues' health concerns and see the workplace as a valuable source of support and information. Cultural norms and expectations regarding caregiving and nurturing roles may influence women educators' attitudes towards employee health and wellbeing (Sawadogo-Lewis et al., 2018). Thus, they may feel a sense of responsibility or obligation to prioritise the wellbeing of their colleagues and view the workplace as a critical avenue for promoting health and wellness.

5.1.9 Educators' Attitudes towards Employee Wellness Programmes

The questions with the highest mean score on the Likert scale were regarding the benefits of employee wellness programmes, the advantages of knowing one's health

status, and the impact of stigmas on seeking counselling and treatment. Educators, on average, expressed neutrality or agreement with these statements. Results from these statements demonstrated that employees would be interested in the idea and the concept of wellness programmes being implemented in their school setting. The interest in these programmes shows that employees are looking to prioritise their wellbeing. However, the question that educators showed the least favourable attitude towards was, "It is important to attend seminars and forums and access internet information about employee wellness." On average, educators either disagreed or were neutral. This finding is similar to those of Banks et al. (2018) on employee participation. Their research revealed that only 36.4% of employees who initially intended to participate completed wellness programmes, and of those, 74.9% were retained. The nuanced reasons behind employees' reluctance to participate have been extensively discussed in Chapter 2. Some of the reasons for a lack of employee participation ranges from a lack of motivation to employees being concerned about protection and confidentiality issues (Banks et al., 2018). Additionally, employees may not find the wellness programme relevant to their current goals and because of this may deem them irrelevant (Banks et al., 2018). This can be reflected throughout this study as the age demographic skewed more to the older population who participated in this research and further stated that they would be interested to engage in wellness programmes.

5.1.10 Likelihood to Participate in Employee Wellness Programme and Age

Interestingly, this study found that educators with more than ten years of experience were significantly ($p < 0.05$, $F > 3.21$) more likely to participate in EWP. In other words, educators with more experience may have a better attitude toward the importance of EWP. This can be attributed, once again, to the older population being more interested in wellness programmes. Additionally, this could be due to exposure to various workplace challenges and stressors over time that have led to their interest in wellness programmes (du Preez, 2010). Furthermore, exposure to these stressors over so many years has led to the educators being burned out. As a result, educators are more aware of the deterioration of their health due to workplace stressors. Hence, they are more interested in finding ways to mitigate these stressors. Educators may have witnessed the impact of these programmes on their health and the health of their colleagues, leading to increased awareness and motivation to participate. With

additional years of experience comes a greater recognition of the importance of self-care and maintaining overall wellbeing (Posluns and Gall, 2020). Participants who have been in the profession for a longer time may prioritise their health and wellbeing more effectively, including actively engaging in wellness initiatives offered by their employer (Posluns and Gall, 2020). Workplace cultures prioritising employee wellbeing and providing institutional support for wellness initiatives may be more prevalent in educational institutions where educators have been employed for extended periods. Educators with outstanding tenure may feel more encouraged and supported by their institution to participate in wellness programmes. Additionally, educators with longer tenures may have developed effective coping strategies for managing stress and burnout, making them more receptive to wellness programmes aimed at stress reduction and mental health support.

5.1.11 Barriers Preventing Educators from Participating in Employee Wellness Programmes

Educators logged 245 responses regarding the barrier preventing them from participating in wellness activities set out by an employee wellness programme (Table 123). The majority (n=78; 64.5%) indicated an inconvenient time or location would be a barrier. Educators cited privacy concerns and beliefs about employers' involvement in personal health or job duties as barriers to wellness activity participation. Eight (6.6%) responders indicated they would not participate in wellness activities because they were uninterested. These findings correspond with Ryde et al.'s (2019) and Banks et al. (2018) findings on employee non-participation. A factor that seems to have been why employees do not participate in wellness programmes is lack of time or location. Employers need to ensure that they allocate designated time to employees to ensure that they can participate in these programmes.

Another finding from this study highlighted that despite how interested employees may be in these programmes, stigmas may lead to individuals not participating. Educators may fear being judged by their colleagues, supervisors, or the broader organisation if they seek counselling or treatment for mental health or personal issues (Ndou, 2022; Wu et al., 2021). The stigma surrounding mental health conditions or seeking help for personal challenges can lead individuals to perceive seeking assistance as a sign of weakness or incompetence (Ndou, 2020). Cultural norms and beliefs surrounding

mental health and help-seeking behaviour vary widely across different communities and societies (Ndou, 2020). In some cultures, there may be solid taboos or stigmas associated with discussing mental health issues openly or seeking professional help for psychological concerns (Ndou, 2020). This can deter individuals from accessing available support services, including those offered through EWP. Employees may worry that seeking counselling or treatment could negatively impact their professional reputation or career advancement opportunities. Concerns about confidentiality breaches or the potential for sharing information with colleagues or supervisors may discourage individuals from accessing support services, even when available through their workplace (Ndou, 2020). Limited knowledge about mental health conditions, available support services, and the effectiveness of treatment options can contribute to the stigma surrounding help-seeking behaviour. Employees may not fully understand the nature of their concerns or the benefits of counselling or treatment through EWP, leading them to avoid seeking assistance altogether.

Therefore, it is paramount that the implementation of wellness programmes highlights and educate employees on the varying benefits associated with EWP. The organisational culture and attitudes of supervisors and colleagues toward mental health and help-seeking behaviour can significantly influence employees' willingness to utilise available support services (Ndou, 2020). A workplace environment that fosters open communication destigmatises mental health issues and promotes a supportive and inclusive culture is more likely to encourage employees to seek help when needed (Wu et al., 2021). These factors are all related to the organisational culture and how this may contribute to the lack of participation (Wu et al., 2021). This finding correlated with Heino et al.'s (2021) findings that stated that factors including peer influences, organisational culture and societal norms can hinder EWP participation. Workplace cultures prioritising long hours, stress, and productivity over employee wellbeing may inadvertently perpetuate unhealthy behaviours and undermine the effectiveness of wellness initiatives (Heino et al., 2021).

Additionally, educators who were younger than the age of 41 years were significantly more likely to believe stigmas prevent participants from seeking counselling, testing and treatment that can be provided as part of an employee wellness programme (Table XIII). Younger educators may better recognise mental health stigma due to their awareness of societal changes and mental health issues compared to older educators

(Stuart, 2016; Ndou, 2020). Typically, younger individuals prioritise mental health and are more inclined to seek support when needed compared to older generations (Stuart, 2016). With their frequent engagement on social media and digital platforms, younger educators may encounter discussions and campaigns focused on diminishing mental health stigma (Stuart, 2016; Latha et al., 2020; Pavlova and Berkers, 2020). Exposure to online resources, advocacy movements, and personal stories shared by peers and influencers can shape their understanding of individuals' barriers to accessing mental health support (Pavlova and Berkers, 2020). These factors suggest that younger educators may be more cognisant of the challenges posed by the stigma surrounding mental health and more motivated to address these barriers within their professional and personal spheres (Pavlova and Berkers, 2020). Their awareness and advocacy efforts can contribute to creating more inclusive and supportive environments where individuals feel empowered to seek the help they need without fear of judgment or discrimination (Pavlova and Berkers, 2020). Although the content viewed on social media may not always be deemed as trustworthy and reliable resources, these platforms may assist in reducing the stigmas of counselling if the correct information is shared. Using the information transcribed above, and from the findings of this study, the next section will develop a normative model for a holistic employee wellbeing programme (HEWP) for private high school educators in South Africa.

5.2 Integrative Discussion: Normative Model of a Holistic Employee Wellbeing Programme

A normative model refers to a standard against which observations or behaviours are evaluated (Rutherford et al., 2022). It represents an ideal or typical pattern that researchers use as a reference point to understand, predict, or prescribe outcomes within a particular context (Baron, 2012). Normative models are often used to guide decision-making processes based on accepted standards or values (Baron, 2012). This section will contribute to the integrative discussion by offering recommendations and guidelines for designing wellbeing programmes tailored to the needs of private high school educators in South Africa. The suggestions stem from the insights gained from the study's exploration of perceptions, knowledge, and attitudes. Additionally, a Holistic Employee Wellbeing Programme Model (HEWP) specifically tailored for private high school educators in South Africa will be introduced. The construction of

this model is informed by the findings of this study, ensuring its relevance and effectiveness in addressing the wellbeing needs of educators in private high schools in South Africa. Drawing upon the General Systems Theory principles and leveraging Gie's (2017) HEWP model.

5.2.1 Model Design: General Systems Theory

The HEWP, Figure 12, utilised in this study for private high school educators in South Africa, is derived and adapted from Gie's (2017) Model of HEWP for the South African Higher Education sector. Both models are grounded in the principles of General Systems Theory. This theory originates in the field of Psychology; General Systems Theory seeks to understand the intricate dynamics of human behaviour and experience by viewing systems as composed of interconnected components (Von Bertalanffy, 2017). These components include the system-environment boundary, inputs, processes, and outputs, all of which interact and influence one another (Von Bertalanffy, 2017). Furthermore, they strive to address the various factors that HEWP should contain when being implemented in private high schools in South Africa. Systems theory offers a trans-disciplinary framework for critically and normatively exploring complex phenomena across various disciplines (Carayon, 2011). In complex social systems like educational institutions, a holistic approach is essential for effective problem-solving (Carayon et al., 2011). By applying General Systems Theory to the private education sector, this study aims to conceptualise a normative model for HEWP (Carayon, 2011).

As living social systems, organisations continuously interact with their environment, with inputs undergoing processes or transformations to produce outputs for both employees and employers, Figure 12 (Von Bertalanffy, 2017). This perspective aligns with Katz and Kahn's (1978) elaboration on the social psychology of organisations, emphasising the dynamic nature of organisational systems (Gie, 2017). Feedback loops are crucial for organisations to adapt and function optimally within their environment (Berg, 2012). The education system can be understood as a socio-technical work system involving human and technological elements (Carayon, 2011). Understanding the complexities of human behaviour requires a holistic approach to studying and comprehending the entirety of the individual (Carayon, 2011). Thereafter,

this method can be applied to the specific context and propose means to implement EWP in the South African private schooling system.

Given the complexity of human behaviour, there is no straightforward solution to employee wellbeing issues (Deci and Ryan, 2015). However, by comprehensively understanding the causes and effects of these issues, researchers can lay the groundwork for future HEWP in this field (Gie, 2017). Through exploring educators' perceptions, knowledge, and attitudes towards EWP, this study aims to establish the foundation of such a holistic programme.

5.2.2 Normative Model of a Holistic Employee Wellbeing Programme for Private High School Educators in South Africa

When employees experience poor health and struggle to maintain work-life balance it often translates into increased absenteeism, decreased productivity and quality of work, heightened conflict, and higher turnover rates within the organisation (Dlamini, 2015). Research has consistently shown a negative correlation between job stress and job performance, indicating that heightened stress levels correspond to diminished job effectiveness (Vazi, 2013; Chen et al., 2019; Ortillo and Ancho, 2021). This dynamic results in detrimental outcomes for both employees and organisations alike. The normative model of the HEWP that has been proposed can be divided into three phases, with a feedback loop component at the end of the third phase, Figure 12. Phase one looks at the inputs and the cause and effect of why educators may suffer from burnout, job dissatisfaction and high staff turnover in this sector. The second phase incorporates assessments and interventions that need to be included in determining the HEWP. Phase three assesses whether the HEWP has led to the expected outcomes, including conducting follow-up assessments.

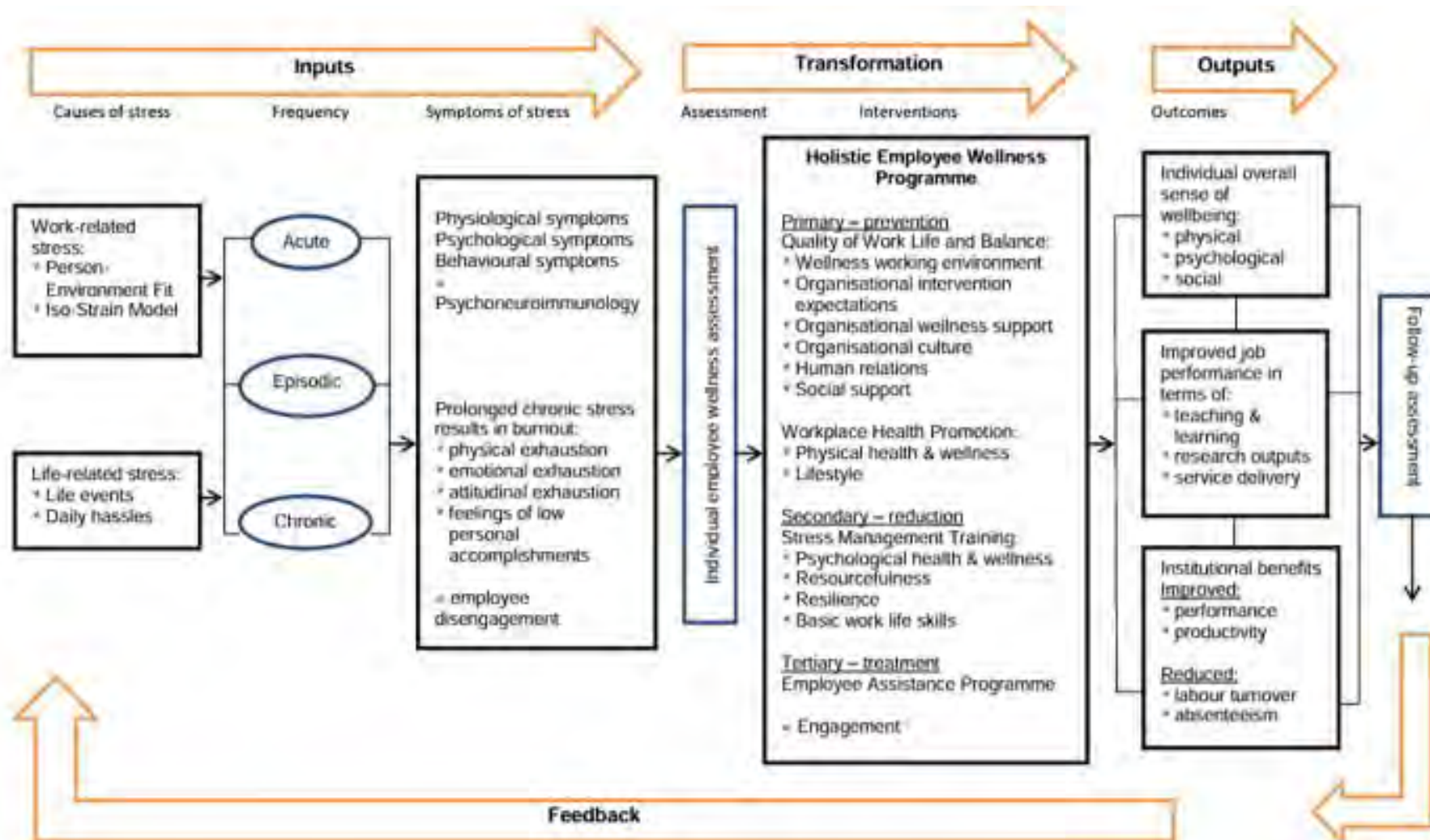


Figure 12: The normative model of a HEWP for Private High School Educators in South Africa (extracted and adapted from Gie,2017).

Phase 1: Inputs

Inputs, in this context, refer to the origins of employee unwellness or disengagement (Gie, 2017). Provided that many researchers and literature have argued that teaching is the most stressful job, the normative model will focus on stress as a focal point for EWP in the private high schooling system in South Africa, Figure 12 (Curtis, 2009; Schonfield et al., 2017 in Agyapong, 2022; Corrente et al., 2022; Barnes and Lang, 2023; Fang et al., 2023). Additionally, educators' classroom performance has undergone assessment through diverse metrics, including student engagement, academic progress, and teacher evaluations (Qin, 2024). Research indicates a clear link between educators' stress levels and their performance in the classroom (Qin, 2024). Notably, heightened stress levels correlate with reduced student engagement, diminished academic achievement, and unfavourable teacher evaluations (Milner, 2008; Fernandez-Batanero et al., 2021; Agyapong et al., 2022; Lim et al., 2022; Qin, 2024). These findings underscore the significance of mitigating and addressing stress among educators to enhance their effectiveness and foster improved learning outcomes for students.

Since this mode uses stress as the focal point for EWP in this sector, it is crucial for researchers and wellbeing programme designers to holistically understand both work-related and life-related stress that impacts educators' health and wellbeing. Two modern interactional theories on work-related stress, specifically the Person-Environment (PE) Fit and IsoStrain Models, were chosen to explore employees' daily wellbeing encounters within the workplace (Gie, 2017). Person-Environment Fit looks at how well employees match their work environment (Cox and Griffiths, 2010). It considers if the environmental demands suit the individual's needs and if the environmental resources support their coping abilities. This theory also examines whether the individual's skills and abilities match the job demands and if the job environment meets their needs for autonomy at work (Cox and Griffiths, 2010: 38). One thing this study did not investigate was the high staff turnover as reported by several researchers (Liu et al., 2012; Dlamini, 2015). Future EWP should incorporate a section that investigates the fit between employees and their current roles, as it is a factor that influences stress.

The Iso-Strain model examines the combination of job demands placed on employees, and the control and support employees receive from their place of employment (Gie, 2017). This is essential as this study uncovered that educators face significant job demands and heavy workloads with minimal institutional support. Furthermore, educators are expected to work overtime and participate in extramural activities outside their teaching responsibilities. The lack of awareness among employees regarding the existence of wellbeing programmes in their institutions indicates an apparent absence of support from their employers. Future wellbeing programme designers should incorporate strategies to address workload stress and provide methods to alleviate pressure from these factors. While wellbeing programmes may only partially resolve the issue of high workloads, they can offer support and facilitate educational and awareness initiatives to help educators and department heads find a better balance.

Life-related stress encompasses both major life events and the daily hassles, as described (Gie, 2017). While these daily hassles may seem mundane, their intensity and frequency can trigger a stress response (Crosswell and Lockwood, 2020). The distinction between work-related and life-related stress becomes blurred due to the holistic nature of individuals as employees, ultimately negatively impacting both the individual and the organisation (Crosswell and Lockwood, 2020). This can lead to challenges such as poor work-life balance and decreased work performance (Crosswell and Lockwood, 2020). The present study observed that staff in private secondary institutions often struggle with work-life balance, as some staff members may be associated with the boarding house, meaning that they too reside on the school campus, thus making it even more difficult for these staff members to distinguish between the life-related stressor and work-related stressors. Wellbeing programmes should, yet again, promote awareness of a healthier work-life balance as a means of support for these educators.

The frequency of stress plays a crucial role in determining the severity and duration of stress symptoms, Figure 12 (Gie, 2017). Acute stress typically arises from a single event or situation, leading to short-term symptoms, Figure 12 (Gie, 2017). Episodic stress involves more frequent occurrences of acute stress and may eventually progress into serious health issues and chronic symptoms (Gie, 2017). Chronic stress, on the other hand, stems from constant exposure to stressors, often due to daily

pressures, leading to the development of persistent symptoms over time (Gie, 2017). The present study revealed that staff in private secondary institutions in South Africa commonly experience chronic stress as they are constantly exposed to stressors, which manifests in physical, psychological, and behavioural symptoms, as well as signs of burnout. Once again, EWP for the private secondary institutions in South Africa should consider this factor and find means to address this factor.

5.2.3 Phase 2: Transformation

The core of a HEWP consists of three critical interventions: primary - prevention, secondary - reduction, and tertiary - treatment, all aimed at fostering employee wellbeing (Gie, 2017). Primary interventions aim to eliminate the root causes of work-related issues. Thereby preventing further harm to employee health and wellbeing, hence termed primary prevention. Gie (2017) has identified that quality of work-life and balance (QWLB) and workplace health promotion as organisational-level and work-environment interventions that organisations should implement to disrupt the negative impact of work-related problems on employee and organisational health and wellbeing (Gie, 2017). Additionally, this may assist in decreasing the high workload expectations placed on educators in private high schools by management. Furthermore, this could improve the work-life imbalance identified in private secondary institutions. Secondary interventions aim to alleviate the psychological symptoms associated with the connection between workplace issues and employee health and wellbeing (Gie, 2017). Thereby reducing the adverse psychological impacts on employees, termed secondary reduction (Gie, 2017). Stress Management Training (SMT) equips employees with coping strategies and enhances their psychological capital, enabling them to handle work-related stressors better (Gie, 2017). Tertiary interventions are designed to tackle stress-related symptoms in employees when primary prevention and/or secondary reduction strategies are not viable or applicable, thereby constituting the concept of tertiary treatment (Gie, 2017).

5.2.4 Phase 3: Output

Once the HEWP is tailored for individuals within the private secondary education system in South Africa, positive outcomes for employees and employers are anticipated. Gie's (2017) study conducted in the higher education sector in South Africa revealed enhancements in the physical and psychological health and wellbeing

of participants in the experimental group. Additionally there was an increased sense of social support (Gie, 2017). Therefore, one can further argue that the proposed HEWP has the potential to enhance overall employee wellbeing, leading to improved wellbeing status and engagement levels (Gie, 2017). Enhanced job engagement resulting from healthier and happier employees will likely translate into improved job performance across academic, teaching, learning, and research domains (Gie, 2017). Additionally, effective implementation and monitoring of the HEWP, with the specific modifications included in this review, may reduce absenteeism and employee turnover in the private high school setting. Improved staff performance and productivity are expected to contribute to attaining institutional strategic objectives (Gie, 2017).

Furthermore, this model can be translated into private secondary institutions (with specific modifications), making it more specific and relatable to private high school educators. For example, this study investigated the topics educators would like EWP to include. The majority of educators (n=88.9%) stated that an employee wellbeing programme in the education sector should focus on the topic of emotional wellbeing. Furthermore, another 71.4% of educators noted that an employee wellbeing programme in the education sector should include occupational wellness. This was followed by physical, social, intellectual, and spiritual wellness. Additionally, educators stated that there are various activities that EWP should include in the educator sector. These activities include professional and confidential counselling, recreational activities, physical health risk assessments, critical incident and trauma support, and HIV/AIDS and chronic disease management education. Wellbeing programme designers should consider incorporating these topics and activities, and they will form part of organisational support.

5.2.4.1 Feedback

Employee wellbeing is dynamic and constantly influenced by both work-related and life-related stressors (Gie, 2017). It is essential to conduct constant and continual follow-ups on employee wellbeing assessments during performance discussions, instead of once-off. This allows individuals to receive feedback on their progress and update their personalised wellbeing plans accordingly.

5.3 Summary

Private high school educators in South Africa play a vital role in generating scientific knowledge and adapting to evolving societal, political, and economic factors. To effectively navigate these changes, these institutions must prioritise the health and wellness of their employees, fostering a supportive work environment. This emphasis on employee-organisational health and wellbeing is essential for private high school educators to meet their strategic goals and effectively respond to external challenges. The proposed HEWP offers a potential solution for these educators to attain optimal employee wellbeing.

CHAPTER 6 | LIMITATIONS, RECOMMENDATIONS, AND CONCLUSION

This section aims to critically evaluate the constraints and shortcomings inherent in this study's methodology, data collection process, and scope. Incorporating limitations is a crucial aspect of research, as it underscores potential factors that may constrain the quality and applicability of the findings while also identifying avenues for future improvement. This section will commence by examining the importance of acknowledging the limitations inherent in this study. Lastly, this section will stress the importance of integrating this awareness into future research on educators' wellbeing in South Africa's private high school sector.

6.1 Limitations

This study encountered limitations, including:

6.1.1 Study Population

The researcher acknowledges that the exclusive focus on private secondary educators may not fully capture the diversity of South Africa's education landscape, thus limiting the generalisability of the findings to all educators in the country. Moreover, it is recognised that educators in private institutions face distinct demands compared to those in the public sector. This factor suggests a potential need for further research to address this disparity. Additionally, educators in privately governed schools in South Africa may experience varying challenges, roles, responsibilities, organisational factors, and many other influences that state-governed high school educators do not share. For example, government schools in South Africa are notorious for having poor infrastructure and facilities (such as toilets not working or teachers having to teach in extreme conditions) and a lack of resources and teaching staff (Statistics South Africa, 2015 in 2019; Kruger, 2019). These stressors place immense pressure on educators' wellbeing and may influence their perceptions, knowledge, and attitudes toward wellbeing programmes. Additionally, these stressors may call for wellbeing programmes to be designed to cater for such demands.

6.1.2 Post-COVID

This research took place after a poignant time around the globe. The Coronavirus pandemic resulted in various heads of state and nations enforcing some form of the

National State of Disaster, which ultimately suspended in-person programmes and pivoted to virtual learning (Doughty and Klima, 2023). During this time, educators were forced to consider new techniques and methods to ensure their students were still receiving the relevant education. This placed immense pressure on educators throughout the globe. In South Africa, The National State of Disaster was proclaimed in March 2020 and was lifted on the 4th of April 2022. Due to this lockdown, disruptions were created by the closures of schools and rotational attendance, which resulted in an enormous impact at both societal and educational levels (Bonal and Gonzalez, 2020). Returning to “normal life” could have placed immense stressors and pressures on educators. For instance, educators transitioned from a sedentary lifestyle while working from home to engaging in fully daily work activities, including sports and extracurriculars. Due to this, educators may have felt an extra sense of fatigue and may have been overwhelmed by the fast-paced change in lifestyle.

6.1.3 Sample/Selection Bias

The sampling method employed may have introduced bias, as participants may have been inclined to participate based on their strong interest or disinterest in the topic. Despite efforts to diversify participant backgrounds and school types, including co-education, boys', and girls' schools, the researcher reasonably concludes that the study managed to mitigate sample/selection biases to a significant extent. However, it is essential to acknowledge that despite these efforts, some level of bias may persist.

6.1.4 Response Bias

Factors such as social expectations and workplace factors may have influenced participants' responses. The absence of controlled environments during data collection could have facilitated communication among participants, potentially impacting the accuracy of their responses. This scenario raises concerns about participants potentially influencing each other's responses, thus distorting their accurate perceptions, knowledge, and attitudes. Educators may have felt compelled to align their responses with societal norms or workplace expectations rather than providing genuine insights. While the researcher acknowledges the absence of a definitive "right" answer to the questionnaire, it is crucial to recognise the potential influence of social expectations on participants' responses.

6.1.5 Central Tendency Bias

The central tendency bias is a notable disadvantage when using a 5-point Likert scale in research (Akbari et al., 2024). This bias occurs when respondents consistently choose the middle option, often labelled as "neutral" or "neither agree nor disagree," to avoid making definitive judgments (Akbari et al., 2024). This inclination towards the central point can result from a desire to appear moderate, uncertainty about the question, or a reluctance to express strong opinions (Akbari et al., 2024). Consequently, this behaviour can lead to a clustering of responses around the midpoint, reducing the variability and richness of the data (Akbari et al., 2024). This concentration around the central option makes it challenging to detect meaningful differences or patterns in the respondents' knowledge, attitudes and perceptions, ultimately compromising the precision and interpretability of the research findings (Akbari et al., 2024). Furthermore, central tendency bias can obscure the true distribution of responses, potentially masking important insights and leading to inaccurate conclusions about the population being studied (Akbari et al., 2024).

6.1.6 Research Time Period

The period from November to February, when the questionnaire was distributed to participants, presents significant limitations for this research, particularly among private high school educators in South Africa. This timeframe aligns with the end of the academic year and the summer holiday break in South Africa, a period marked by educators facing exceptionally heavy workloads due to tasks such as setting and marking final examinations. Additionally, educators are occupied with wrapping up administrative duties and closing out the academic year, further intensifying their workload. Subsequently, many educators take leave during this time to recuperate from the demanding school year, potentially reducing their availability and responsiveness to research surveys. The culmination of administrative tasks, grading responsibilities, and the prioritisation of personal time off may lead to lower response rates and introduce biases in data collection. Consequently, conducting research during November to February may not adequately capture a representative sample of high school educators' perspectives in South Africa, thus limiting the generalisability and reliability of the study's findings.

6.2 Recommendations for Future Studies

This section is focused on suggesting and outlining additional avenues for future research to explore the wellbeing of South African educators, considering the country's distinctive historical context and contemporary systemic challenges.

6.2.1 Incorporating Gender Differences

Gender emerged as a significant factor in this study. It is crucial to consider this aspect for future studies. Reporting the gender differences will enhance the credibility and clarity of the results. Furthermore, including actual findings and significance levels when discussing gender differences can provide more robust and credible conclusions. This approach not only supports the validity of the conclusions but also aids in supporting educators in South Africa.

6.2.2 Larger Sample Size and Research Methods

Future research should prioritise larger sample sizes and employ rigorous research methods to enhance the study's robustness and generalisability. Thorough power analyses should be conducted to ensure adequate representation of educators from both private and public schools, considering socio-economic factors and other contextual influences.

6.2.3 Incorporating Educator Diversity

Expanding the scope to include individuals from different educational levels and sectors, including pre-primary and tertiary institutions, could provide a more comprehensive understanding of educators' perceptions and attitudes toward wellbeing programmes. This inclusive approach may shed light on unique challenges educators face across diverse settings.

6.2.4 Varied Data Collection Methods

Researchers should consider employing diverse data collection methods like observation, in-depth interviews, and questionnaires to capture nuanced insights into educators' experiences and perspectives. This multifaceted approach can help minimise reporting biases and ensure a more accurate portrayal of educators' wellbeing concerns.

6.2.5 Exploring Work-Life Balance

Future studies should investigate educators' work-life balance perceptions and experiences, recognising the significant pressures and workload demands faced. Understanding educators' perceptions of work-life balance can inform targeted interventions to support overall wellbeing.

6.2.6 Comparison of Programme Participation

Examining differences in perceptions, knowledge, and attitudes between educators with access to wellness programmes and those without could offer valuable insights into programme effectiveness and engagement levels. This comparative analysis can guide efforts to optimise wellness programme design and implementation.

6.2.7 Practical Recommendations

Educational institutions should prioritise educators' wellbeing by organising regular academic wellbeing workshops led by experienced professionals. These workshops can underscore the importance of wellbeing and provide educators with practical strategies to enhance their overall health and resilience.

6.3 Conclusion

The study's findings provide valuable insights into the perceptions, knowledge, and attitudes of private school educators in South Africa towards employee wellbeing programmes. It revealed that educators value their workplace as a potential source of information on employee health and wellbeing, particularly female educators. However, there were concerns about privacy, with some educators hesitant to participate due to worries about colleagues knowing their health status. Furthermore, the study highlighted the influence of demographic factors on educators' attitudes towards wellbeing programmes.

Educators with more than ten years of experience showed greater willingness to engage in such programmes, while younger employees expressed concerns about the stigma associated with seeking help for mental health issues. These findings emphasise the need for tailored wellbeing programmes that address the specific needs and concerns of educators in the private school sector in South Africa. Designers of future wellbeing initiatives should consider the demographic diversity and

varying attitudes towards wellbeing among educators. Additionally, future wellbeing programme designers should consider these findings when developing EWP. By incorporating insights from this study, along with the proposed normative HEWP model, wellbeing programme designers can create more effective and inclusive wellbeing initiatives that support the overall wellbeing of South African educators in the private high school system. Thus, creating more inclusive and effective programmes which will benefit both employers and employees.

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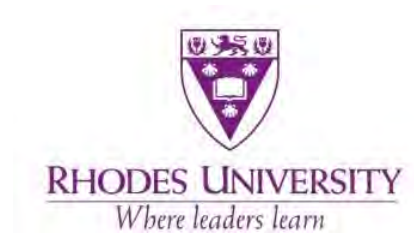
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APPENDICES

Appendix A: Initial Email to Gate Keepers



Rhodes University Human Research Ethics Committee

PO Box 94, Makhanda, 6140, South Africa

t: +27 (0) 46 603 7727

f: +27 (0) 46 603 8822

e: ethics-committee@ru.ac.za

<https://www.ru.ac.za/researchgateway/ethics/>

25 November 2022

Mr Motheo Moroane

Human Kinetics and Ergonomics

Email: motheomoroane@yahoo.com

Review Reference: 2022-5851-7282

Dear Mr Motheo Moroane

Re: The Perceptions, Knowledge and Attitudes among Private High School Educators in South Africa towards Employee Wellness Programmes.

Researcher: Mr Motheo Moroane

Supervisor(s): Professor Candice Christie, ,

This letter confirms that the above research proposal has been reviewed by the Rhodes University Human Research Ethics Committee (RU-HREC) and **PROVISIONALLY APPROVED PENDING PERMISSION/GATEKEEPER LETTER(S)**.

Gatekeeper permission is required from: Mr Shane Kidwell, Mr Jannie De Villiers, Mr David Wright, Mr Derek Bradley, Mrs Odelle Howard, Mrs Danielle Meikle, Mrs Zeld Savopoulos, Mr Keith Viljoen, Mr Matthew Davies, Mr David du Toit, Dr Sally James, Dr Carel Kriek, Mr Keith Wilke, Mr Joseph Gerassi, Mr T Fourie, Mr Chris Jewell, Mr Clyde MacDonald, Mrs Heidi Rea, Mr George Harris, Mr Elwyn van der Aardweg, Mr Antony Clark, Mr Allen van Blerk, Mr Jonathan Manley, Mrs Sue Tasker, Dr Gary Elliott, Mr Alan Redfern, Mr Mark Godfrey, Mr Stephen Lowry, Mr Albert Pienaar, Mr Allen Laing, Mr Francis Hloma, Mr John Zacharias, Mr Joseph Ellis, Mr Luciano Antonio, Mr Tony Reeler, Mr David Clark, Mrs Heather Goedeke, Mrs Sharon Brown, Mr Alex Gitlin, Mr Graham Sayer, Mr Julian Cameron, Mr Justin Skea, Mrs Sylvia Steyn.

Once the Gatekeeper permission letters have been received please forward it to the Ethics Coordinator, in order to finalize your ethics approval.

Sincerely,

Dr Janet Hayward

Chair: Rhodes University Human Research Ethics Committee, RU-HREC

cc: Ethics Coordinator

Appendix B: Initial Email to Gate Keepers

Dear Mr/Mrs [Insert Gatekeeper's Name]

I hope that this email finds you well.

I am currently enrolled for a Master of Science in Human Kinetics and Ergonomics, at Rhodes University. I would kindly like to request permission to conduct my research at *[Private High School Name]*.

The research project aims to investigate South African private high school educators' perceptions, knowledge, and attitudes toward employee wellness programmes. Additionally, this research aims to propose a normative holistic employee wellness programme framework specifically designed for private high school educators. I have attached an information leaflet to this email outlining the study's aims, what will be expected from participants (specifically the teachers) and the benefits and risks associated with this study.

Should you agree, could I kindly request that you provide written consent by signing the consent form attached?

If you require any additional information, please do not hesitate to contact me.

Your consideration is much appreciated!

Kindest regards,
Motheo Moroane

Appendix C: Follow-Up Email to Gatekeepers

Dear [Insert Gatekeeper's Name]

I am wishing you a happy, healthy, and prosperous New Year!

I write to follow up on my previous email sent on the 29th of November 2022, in which I outlined the scope of my Master's research project, which aims to understand "*The perceptions, knowledge, and attitudes among private high school educators in South Africa toward employee wellness programmes.*"

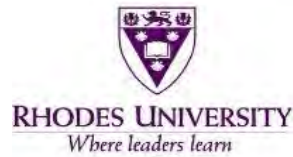
I acknowledge that the reopening of schools comes with immensely high stress and pressure and is an extremely challenging and busy time of the year with the induction of new pupils, parents, and new staff members. However, I would be most grateful if you could kindly respond to this email by indicating whether you would be interested in participating in this study or not.

I look forward to hearing from you!

Sincerely,

Motheo Moroane

Appendix D: Information Letter to Gatekeepers



73 African St, Grahamstown, Makhanda, 6139 • Tel: 046 603 8471 • e-mail:

g18m2452@campus.ru.ac.za

REQUEST FOR PERMISSION TO CONDUCT RESEARCH

17 November 2022

Dear Mr/Mrs [Insert Name]

I am a registered Master of Science student in the Human Kinetics and Ergonomics Department at Rhodes University. My supervisors are Prof. Candice Christie and Dr. Candice MacMillan. I am writing to you to ask if you would kindly consider permitting your staff members to participate in my Master's research. My research's proposed title is *"The perceptions, knowledge, and attitudes among private high school educators in South Africa towards employee wellness programmes."*

The World Competitive Report has poorly ranked South Africa in Human Resource Management and Development. The South African education system accommodates, amongst other things, more than 12,3 million learners, 29 38 primary and secondary schools, and only 375 00 educators. The South African Department of Education has implemented several initiatives to improve education and the wellbeing of SA educators. However, research surrounding the work-related health and wellbeing of educators has shown that burnout, job dissatisfaction, depression, anxiety, a lack of physical health consequences, and infections such as HIV and AIDS, TB, and Malaria are prominent among today's educators.

Employee wellness programmes have had positive impacts on various aspects of companies in different industries, including the education sector. Limited research has, however, investigated educators' perceptions, knowledge, and attitudes toward workplace/employee wellness programmes in the South African context. Therefore,

this study will provide insights into the perceptions, knowledge, and attitudes of private high school educators toward employee wellness programmes.

Participants who volunteer to participate in this study will be requested to answer a confidential questionnaire. The questionnaire comprises five sections and will take approximately 15 - 20 minutes to complete. The different sections of the questionnaire aim to collect data related to the following: educator demographics, work-life balance, participants' perceptions, knowledge, and attitudes toward employee wellness programmes. Participants will be requested to complete this online questionnaire within two weeks of receiving the questionnaire link.

The questionnaire used in this study is confidential and will not require any names to be submitted. The researcher will take all the necessary steps to ensure that the anonymity of the participants and the school's name are protected. Involvement in this study is entirely voluntary, and participants will be informed that they may withdraw from the study at any time without suffering any negative consequences. Once questionnaires have been completed, all data will be safely stored on the online questionnaire database or within the Human Kinetics and Ergonomics department, which will only be accessible by the researcher. The data will also be collectively analysed and presented so that no individual data is presented. Once the entire study has been completed, school gatekeepers (such as executive heads and other relevant stakeholders) and all participants will receive a written report highlighting the findings of this study.

The benefit of this research is that it might identify misperceptions and knowledge gaps of educators toward EWP's. By doing this research, educators will gain insight into the components of health and wellbeing and information on improving each aspect of wellness as a result, and the final dissertation will be shared with the participants. Additionally, completing this questionnaire may improve employees' overall self-awareness of their health and wellness. Another benefit of this research is that once the entire study has been completed, school gatekeepers and all participants will receive a written report highlighting the findings of this study.

This study's results can provide insights into educators' perspectives and reasons for these perspectives. Another benefit is that this study might also unveil factors influencing educators' decision to participate in EWP. Should the results indicate that

educators' perceptions are influenced by misinformation, or lack of knowledge about EWPs, measures to modify perceptions by providing accurate information can be designed and implemented. Future researchers can address these misinformed notions and adequately educate the participants. Participants' awareness of their health and wellbeing may increase employee morale and further improve organisational performance. There are no foreseeable risks to the employee related to this study. There is a low reputational risk associated with participating in this study. However, this risk will be mitigated as no institutional name will be mentioned in the final and published dissertation, and strict confidentiality will be maintained.

Participation by educators within your institution will be greatly appreciated. Should you be interested in participating, I would be most grateful if you could indicate this by signing the form attached to this e-mail titled "Gatekeepers Permission". Additionally, I would be most grateful if you were to return this form to the researcher via e-mail, as we will need to submit this to our ethics committee for final clearance. Lastly, if you permit the researchers to conduct the study at your institution, you will be requested to provide a list of volunteers with their contact details once the volunteers have granted permission for you to do so. This is to ensure that we are POPIA compliant. Thereafter, the volunteers will be contacted with an information leaflet and an online consent form they must sign before completing the online questionnaire.

Should you require any further information, please do not hesitate to contact my supervisor or me. Our contact details are as follows:

Co-Researcher:

Motheo Moroane

g18m2452@campus.ru.ac.za

0825605737

Supervisors:

Prof. Candice Christie

c.christie@ru.ac.za

(0)46 603 7369

Dr Candice Macmillan

c.macmillan@ru.ac.za

(0)46 603 7369

Your permission to conduct this study will be greatly appreciated!

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Motheo Moroane', with a long horizontal flourish extending to the right.

Motheo Moroane

Appendix E: Gatekeeper's Consent Form



PERMISSION TO CONDUCT RESEARCH

29 November 2022

I am hereby seeking your consent to conduct research on educators from [*Private High School Name*].

Study

“The Perceptions, Knowledge and Attitudes among Private High School Educators in South Africa towards Employee Wellness Programmes.”

Supervisors

Associate Professor Candice Christie

Doctor Candice MacMillan

Co-Researcher

Motheo Moroane

This letter serves to confirm that _____ (**school's name**) is willing to participate in the above mentioned study which will be conducted by co-researcher mentioned above.

Yours sincerely,

_____ X

(School Principal's Signature)

Rhodes University, Research Office, Ethics

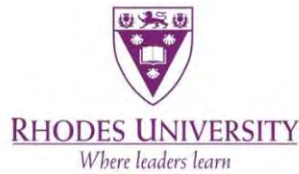
Ethics Coordinator: ethics-

committee@ru.ac.za t: +27 (0) 46 603 7727

f: +27 (0) 86 616 7707

Room 220, Main Admin Building, Drostdy Road, Grahamstown, 6139.

Appendix F: Information Sheet



Department of Human Kinetics and Ergonomics

73 African St, Grahamstown, Makhanda, 6139 • Tel: 046 603 8471 • e-mail:

g18m2452@campus.ru.ac.za

INFORMATION SHEET TO POTENTIAL PARTICIPANTS

Dear Sir/Ma'am,

My name is Motheo Moroane. I am currently enrolled for a Master of Science degree in Human Kinetics and Ergonomics at Rhodes University. Ergonomics focuses on improving efficiency and productivity by applying psychological principles to engineering and designing products, processes, and systems. Additionally, interactions between humans and other elements of work systems are investigated, ultimately aiming to optimise human wellbeing and overall system performance. I am researching the perceptions, knowledge, and attitudes towards employee wellness programmes (EWP) among educators in the South African education system.

Why is this study important?

The World Competitive Report has poorly ranked South Africa in Human Resource Management and Development. The South African education system accommodates, more than 12,3 million learners, 29 38 primary and secondary schools, and only 375 00 educators. The South African Department of Education has implemented several initiatives to improve education and the wellbeing of SA educators. However, research surrounding the work-related health and wellbeing of educators has shown that burnout, job dissatisfaction, depression, anxiety, a lack of physical health consequences, and infections such as HIV and AIDS, TB, and Malaria are prominent in today's educators. Employee wellness programmes have had positive impacts on various aspects of companies, in different industries, including the education sector. Limited research has, however, investigated educators' perceptions, knowledge, and attitudes toward workplace/employee wellness programmes in the South African

context. This study will, therefore, aim to provide insights into the perceptions, knowledge, and attitudes of private high school educators toward employee wellness programmes. From there, this study will propose a normative holistic employee wellness programme suited for private high school secondary educators in South Africa.

What would you be expected to do?

A link to an online Google Forms questionnaire will be shared with you. The questionnaire comprises three sections and will take approximately 15 – 20 minutes to complete. The different sections of the questionnaire aim to collect data related to the following: educators' background and experience, educators' perceptions and knowledge of employee wellness programmes, and section three will investigate educators' attitudes of employee wellness programmes. Lastly, you will be requested to complete this online questionnaire within two weeks after receiving the link to the questionnaire.

What are the benefits and risks of participating in this study?

Benefits and risks to the participants:

This research might identify misperceptions and knowledge gaps of educators toward EWP's. By doing this research, educators will gain insight into the components of health and wellbeing and information on improving each aspect of wellness as the results and the final dissertation will be shared with the participants. Additionally, completion of this questionnaire may improve employees' overall self-awareness of their health and wellness. There are no foreseeable risks to the participants related to this study.

Benefits and risks to the institution:

Once the entire study has been completed, school gatekeepers and all participants will receive a written report highlighting the findings of this study. This study's results can provide insights into educators' perspectives and reasons for these perspectives. This study might also unveil factors influencing educators' decision to participate in EWP. Should the results indicate that educators' perceptions are influenced by misinformation or lack of knowledge about EWPs, measures to modify perceptions by providing accurate information can be designed and implemented. Future researchers

can address these misinformed notions and adequately educate the participants. Participants' awareness of their health and wellbeing may increase employee morale and further improve organisational performance. There is a low reputational risk associated with participating in this study. However, this risk will be mitigated as no institutional name will be mentioned in the final and published dissertation and strict confidentiality will be maintained.

Will information be handled as confidential?

Each school's name and identity will be kept anonymous. The questionnaire used in this study is confidential and will not require any names to be submitted. The researcher will take all the necessary steps to ensure that the anonymity of the participants and the school's name are protected. Involvement in this study is entirely voluntary, and participants may withdraw from the study at any time, without suffering any negative consequences. Once questionnaires have been completed, all data will be safely stored on the online questionnaire database or within the Human Kinetics and Ergonomics department, which will only be accessible by the researcher. The data will also be collectively analysed and presented so that no individual data is presented. Once the entire study has been completed, school gatekeepers (such as executive heads and other relevant stakeholders) and all participants will receive a written report highlighting the findings of this study.

For more information, or if you have any queries, please do not hesitate to contact my supervisors or me.

Our contact details are as follows:

Co-Researcher:

Motheo Moroane

E-mail: g18m2452@campus.ru.ac.za

Supervisors:

Ass. Prof. Candice Christie

c.christie@ru.ac.za

(0)46 603 7369

Dr Candice Macmillan

c.macmillan@ru.ac.za

(0)46 603 7369

Rhodes University Research Ethics Committee contact details:

Dr Janet Hayward

j.hayward@ru.ac.za

046 603 8232

Kind regards,

A handwritten signature in black ink, appearing to read 'Motheo Moroane', with a long horizontal flourish extending to the right.

Motheo Moroane

Appendix G: Participant Consent Form



PARTICIPANT INFORMED CONSENT

Title: The Perceptions, Knowledge and Attitudes among Educators in South Africa towards Employee Wellness Programmes

I, *Motheo Moroane* from the Department of Human Kinetics and Ergonomics, Rhodes University, have requested permission to conduct the research project mentioned above.

The nature and the purpose of the research project and of this informed consent declaration have been explained to me in a language that I understand.

I am aware that:

1. The purpose of the research project is to investigate the perceptions, knowledge and attitudes of educators in South Africa towards employee wellness programmes. Data for this study will be collected via an online questionnaire using Google Forms.
2. The Rhodes University has given ethical clearance to this research project (2022-5851-7282) and I have seen/may request to see the clearance certificate by contacting the Ethics Coordinator (ethics-committee@ru.ac.za)
3. By participating in this research project, I will contribute towards research aimed to providing insights into the perceptions, knowledge and attitudes of South African private high school educators towards employee wellness programmes (EWP). Gaining insights into these aspects is one of the steps that can facilitate the design and implementation of new, or the improvement of existing EWP in the education system. Effective EWP might ultimately provide mutual benefit to educators and the overall education system.
4. I will participate in the project by completing an online Google forms questionnaire. I am aware that this questionnaire comprises five sections and

will take approximately 15 – 20 minutes. The different sections of the questionnaire aim to collect data related to the following: educators' demographics, work-life balance, participants' perceptions, knowledge, and attitudes of wellness programmes. Lastly, I am aware that I will be given two weeks to complete this online questionnaire once I have received the email containing the link to the questionnaire.

5. My participation is entirely voluntary and should I at any stage wish to withdraw from participating further, I may do so without any negative consequences.
6. I will not be compensated for participating in the research.
7. The following benefits are associated with my participation:
 - This study might identify misconceptions and knowledge gaps of educators towards wellness programmes.
 - This research project will further provide insight into the components of health and wellbeing.
 - Completion of the questionnaire may improve educators' overall self-awareness and their health and wellness.
 - This study may unveil factors according to your perceptions, knowledge and attitudes which influences educators' decisions
 - Educators' awareness of their health and wellbeing may increase their morale and further improve organisational performance.
8. I am aware that there are no foreseeable risks to me or the institution I am affiliated with.
9. The researcher intends to publish the research results in the form of a Master's dissertation and presentation at the end of year departmental seminar. Additionally, the research will be published in a relevant peer-review journal. However, confidentiality and anonymity of records will be maintained and that my name and identity will not be revealed to anyone who has not been involved in the conducting of the research, *unless I indicate to the contrary/recognise that as a public figure my identity will inevitably be/become known. (Agree/Accept loss of confidentiality)* **(It remains my right in terms of the Protection of Personal Information Act to request the researcher to provide me with a detailed explanation of just how this confidentiality and anonymity will be achieved. I may also request to know how this**

information will be stored securely and for how long, as well as whether it is likely to be used again in further research.)

10. **I will receive feedback** in the form of email and research thesis regarding the results obtained during the study. **(This is a right I possess in terms of the Protection of Personal Information Act and the form the feedback will take should be communicated to me). I elect not to receive feedback.**
11. Any further questions that I might have concerning the research, or my participation will be answered by Motheo Moroane, who can be contact via cell-phone on 0825605737, or alternatively, via email on g18m2452@campus.ru.ac.za.
12. By signing this informed consent declaration, I am not waiving any legal claims, rights or remedies.
13. A copy of this informed consent declaration will be given to me, and the original will be kept on record.

I,, have read the above information / confirm that the above information has been explained to me in a language that I understand and I am aware of this document's contents. I have asked all questions that I wished to ask and these have been answered to my satisfaction. I fully understand what is expected of me during the research.

I have not been pressurised in any way and I voluntarily agree to participate in the abovementioned project.

.....

.....

Participants signature

Date



Appendix H: Face and Content Validity: Dr Obiora

FACE VALIDITY

Please mark “Yes” or “No” to indicate a favourable or unfavourable rating respectively. A favourable rating means that the item was objectively structured and could be positively classified under the thematic category.

Under the “comment” section: Please identify any deficient areas and provide recommendations or suggestions on ways to improve the sentence structure to ensure clarity and conciseness based on any difficulties encountered in deciphering the instructions for filling out the instrument.

	Yes	No	Comment
Appropriateness of grammar.	x		
The clarity and unambiguity of items.	x		
The correct spelling of words.	x		
The correct structuring of sentences.	x		

Appropriateness of font size.	x		
The structure of the instrument in terms of construction and well-thought-out format.	x		

CONTENT VALIDITY

Please indicate if you “agree” or “disagree” with the inclusion and relevance of the question under the thematic category.

An “Agree” rating indicates that the:

- Item was objectively structured
- Positively classified under the thematic category
- No inconsistencies
- No difficulties regarding the clarity and conciseness of the individual item

Please identify deficient areas and provide recommendations or suggestions on ways to improve the sentence structure to ensure clarity and conciseness based on any difficulties encountered in deciphering the instructions for filling out the instrument.

THE PERCEPTIONS, KNOWLEDGE AND ATTITUDES AMONG EDUCATORS IN SOUTH AFRICA TOWARDS EMPLOYEE WELLNESS PROGRAMMES

Dear Participant,

Thank you for agreeing to participate in this study. This study aims to determine educators' perceptions, knowledge and attitudes towards employee wellness programmes. This questionnaire comprises three sections and will take approximately 15 - 20 minutes to complete. Please answer as truthfully as possible.

Thank you, once again, for your participation!

SECTION 1: BACKGROUND AND EXPERIENCE

QUESTION/ITEM	AGREE	DISAGREE	COMMENT
Please specify your age (years). <input type="radio"/> 18 – 21 <input type="radio"/> 22 – 25 <input type="radio"/> 26 – 30	x		

<ul style="list-style-type: none"> <input type="radio"/> 31 – 35 <input type="radio"/> 36 – 40 <input type="radio"/> 41 – 45 <input type="radio"/> 46 – 50 <input type="radio"/> 51 years and above 			
<p>Please indicate your sex.</p> <ul style="list-style-type: none"> <input type="radio"/> Male <input type="radio"/> Female <input type="radio"/> Non-binary <input type="radio"/> Prefer not to disclose 	x		
<p>Please indicate the highest education you have obtained.</p> <ul style="list-style-type: none"> <input type="radio"/> Diploma <input type="radio"/> Bachelor's degree <input type="radio"/> Honour's degree <input type="radio"/> Master's degree <input type="radio"/> PhD degree <input type="radio"/> Post-doctoral degree <input type="radio"/> Other (Specify) _____ 	x		
<p>How many years have you been employed as an educator?</p> <ul style="list-style-type: none"> <input type="radio"/> Less than 1 year <input type="radio"/> 1 – 2 years <input type="radio"/> 3 – 4 years <input type="radio"/> 5- 6 years 	X		

<ul style="list-style-type: none"> ○ 7 – 8 years ○ 9 – 10 years ○ More than 10 years ○ Other (Specify) _____ 			
<p>If you are a high school educator, which grade(s) do you currently teach? (You may select more than one option)</p> <ul style="list-style-type: none"> ○ Grade 8/Form I ○ Grade 9/Form II ○ Grade 10/Form III ○ Grade 11/Form IV ○ Grade 12/Form V ○ N/A 	X		
<p>Which subject(s) do you currently teach?</p> <p>_____</p>	X		
<p>On average, how many classes do you teach per week?</p> <p>_____</p>	X		
<p>On average, how many hours per day do you spend at work (excluding lunch breaks and any extramural activities)?</p>	X		

<ul style="list-style-type: none"> ○ Less than 1 hour ○ 2 – 3 hours ○ 4 – 5 hours ○ 6 – 7 hours ○ 8 – 9 hours ○ 10 – 11 hours ○ More than 12 hours 			
<p>On average, how many hours do you spend at your extramural activity per day?</p> <ul style="list-style-type: none"> ○ I do not have any extramural activities ○ Less than 1 ○ 2 – 3 ○ 4 – 5 ○ 6 – 7 ○ 8 – 9 ○ 10 – 11 	X		
<p>On average, how many times per week do you work overtime (time worked in addition to one's normal working hours)?</p> <ul style="list-style-type: none"> ○ Never ○ 1 – 2 times ○ 3 – 4 times ○ 5 – 6 times ○ Everyday 	X		

<p>How many hours do you typically spend working overtime (time worked in addition to one's normal working hours) per day?</p> <ul style="list-style-type: none"> <input type="radio"/> None <input type="radio"/> Less than 1 hour <input type="radio"/> 1 – 2 hours <input type="radio"/> 3 – 4 hours <input type="radio"/> 5 – 6 hours <input type="radio"/> 7 – 8 hours <input type="radio"/> More than 8 hours 	X		
<p>Are you compensated/incentivised for working overtime(time worked in addition to one's normal working hours)?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	X		

SECTION 2: KNOWLEDGE AND PERCEPTION

QUESTION/ITEM	AGREE	DISAGREE	COMMENT
<p>Does your place of employment have an existing employee wellness programme or host employee wellness</p>	x		

<p>activities? If your answer is "no" or "I'm not sure", please proceed to question 17.</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> I'm not sure</p>			
<p>If yes to the previous question, how often do you participate in employee wellness activities?</p> <ul style="list-style-type: none"> <input type="radio"/> Never <input type="radio"/> Rarely <input type="radio"/> Sometimes <input type="radio"/> Often <input type="radio"/> Always 	X		
<p>Have you ever received information regarding employee wellness from your place of employment? If your answer is "no" or "I'm not sure", proceed to question 19.</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> I'm not sure</p>	X		
<p>If yes to the previous question, how often do you receive information pertaining to employee wellness programmes?</p>	X		

<ul style="list-style-type: none"> <input type="radio"/> Daily <input type="radio"/> Weekly <input type="radio"/> Monthly <input type="radio"/> Quarterly <input type="radio"/> Other (Specify) _____ 			
<p>How would you rate your knowledge of employee wellness programmes?</p> <ul style="list-style-type: none"> <input type="radio"/> Poor <input type="radio"/> Fair <input type="radio"/> Good <input type="radio"/> Very good <input type="radio"/> Excellent 	X		
<p>In your own words, please describe your understanding of an employee wellness programme.</p> <p>_____</p>	X		
<p>What do you think the benefits of an employee wellness programme are? (You may select more than one option)</p>	X		

<ul style="list-style-type: none"> ○ Improve employee general health and wellbeing. ○ Improve employee job satisfaction. ○ Improve employee performance. ○ Improve worker productivity and efficiency. ○ Improve organisational performance. ○ Improve employee engagement (decrease presenteeism). ○ Reduce workplace non-attendance (absenteeism). ○ Other (Specify) _____ ○ There are no benefits. 			
<p>The use of services provided by the wellness programme can help improve employee health and increase worker productivity.</p> <ul style="list-style-type: none"> ○ Strongly disagree ○ Disagree ○ Uncertain/ neutral ○ Agree ○ Strongly agree 	x		

<p>The workplace can be a valuable source of information on employee health and wellbeing.</p> <ul style="list-style-type: none"> <input type="radio"/> Strongly disagree <input type="radio"/> Disagree <input type="radio"/> Uncertain/ neutral <input type="radio"/> Agree <input type="radio"/> Strongly agree 	X		

SECTION 3: ATTITUDES

QUESTION/ITEM	AGREE	DISAGREE	COMMENT
<p>If your place of work has an employee wellness programme: I am benefitting from the services and activities of the employee wellness programme. If not, move to question 26.</p> <ul style="list-style-type: none"> <input type="radio"/> Strongly disagree <input type="radio"/> Disagree <input type="radio"/> Uncertain/ neutral <input type="radio"/> Agree <input type="radio"/> Strongly agree 	X		
<p>If your place of work does not have an employee</p>	X		

<p>wellness programme: I would benefit from an employee wellness programme, should it be implemented.</p> <ul style="list-style-type: none"> ○ Strongly disagree ○ Disagree ○ Undecided/neutral ○ Agree ○ Strongly disagree 			
<p>If your place of work does not have an employee wellness programme: I will engage in employee wellness programme activities and services, should they be implemented at my place of employment.</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> I'm not sure</p>	X		
<p>There is an advantage in knowing one's health status.</p> <ul style="list-style-type: none"> ○ Strongly disagree ○ Disagree ○ Uncertain/ neutral ○ Agree ○ Strongly agree 	X		

<p>It is important to attend seminars and forums and access internet information about employee wellness.</p> <ul style="list-style-type: none"> <input type="radio"/> Strongly disagree <input type="radio"/> Disagree <input type="radio"/> Uncertain/ neutral <input type="radio"/> Agree <input type="radio"/> Strongly agree 	X		
<p>Stigma prevents employees from seeking counselling, testing and treatment that can be provided as part of an employee wellness programme.</p> <ul style="list-style-type: none"> <input type="radio"/> Strongly disagree <input type="radio"/> Disagree <input type="radio"/> Uncertain <input type="radio"/> Agree <input type="radio"/> Strongly agree 	X		
<p>Which of the following wellness programme activities would you engage in should they be made available?</p> <ul style="list-style-type: none"> <input type="radio"/> Professional and confidential counselling <input type="radio"/> Physical health risk assessments 	X		

<ul style="list-style-type: none"> ○ Critical incident and trauma support ○ HIV/AIDS and chronic disease management education ○ Recreational activities ○ None of the above 			
<p>Are there any barriers that would prevent you from participating in wellness activities? (You may select more than one option)</p> <ul style="list-style-type: none"> ○ Inconvenient time or location. ○ I have no time. ○ My employer should not be involved in my personal health (privacy). ○ I'm concerned about other employees knowing about my health (confidentiality). ○ Lack of management support. ○ My job duties do not allow me to participate. ○ Just not interested. ○ Other (Specify). 	x		

Appendix I: Face and Content Validity: Dr King

FACE VALIDITY

Please mark “Yes” or “No” to indicate a favourable or unfavourable rating respectively. A favourable rating means that the item was objectively structured and could be positively classified under the thematic category.

Under the “comment” section: Please identify any deficient areas and provide recommendations or suggestions on ways to improve the sentence structure to ensure clarity and conciseness based on any difficulties encountered in deciphering the instructions for filling out the instrument.

	Yes	No	Comment
Appropriateness of grammar.	Yes		
The clarity and unambiguity of items.	Yes		Mostly yes, please see some of my comments regarding certain question items.
The correct spelling of words.	Yes		

The correct structuring of sentences.	Yes		
Appropriateness of font size.	Yes		
The structure of the instrument in terms of construction and well-thought-out format.	Yes		Yes, but I think you can consider the order of some questions. Please refer to my comments below and in my mail.

CONTENT VALIDITY

Please indicate if you “agree” or “disagree” with the inclusion and relevance of the question under the thematic category.

An “Agree” rating indicates that the:

- Item was objectively structured
- Positively classified under the thematic category
- No inconsistencies
- No difficulties regarding the clarity and conciseness of the individual item

Please identify deficient areas and provide recommendations or suggestions on ways to improve the sentence structure to ensure clarity and conciseness based on any difficulties encountered in deciphering the instructions for filling out the instrument.

THE PERCEPTIONS, KNOWLEDGE AND ATTITUDES AMONG EDUCATORS IN SOUTH AFRICA TOWARDS EMPLOYEE WELLNESS PROGRAMMES

Dear Participant,

Thank you for agreeing to participate in this study. This study aims to determine educators' perceptions, knowledge and attitudes towards employee wellness programmes. This questionnaire comprises three sections and will take approximately 15 - 20 minutes to complete. Please answer as truthfully as possible.

Thank you, once again, for your participation!

SECTION 1: BACKGROUND AND EXPERIENCE

QUESTION/ITEM	AGREE	DISAGREE	COMMENT
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<p>Please specify your age (years).</p> <ul style="list-style-type: none"> <input type="radio"/> 18 – 21 <input type="radio"/> <input type="radio"/> 22 – 25 <input type="radio"/> <input type="radio"/> 26 – 30 <input type="radio"/> <input type="radio"/> 31 – 35 <input type="radio"/> <input type="radio"/> 36 – 40 <input type="radio"/> <input type="radio"/> 41 – 45 <input type="radio"/> <input type="radio"/> 46 – 50 <input type="radio"/> <input type="radio"/> 51 years and above <input type="radio"/> 	<p>Agree</p>		
<p>Please indicate your sex.</p> <ul style="list-style-type: none"> <input type="radio"/> Male <input type="radio"/> <input type="radio"/> Female <input type="radio"/> <input type="radio"/> Non-binary <input type="radio"/> <input type="radio"/> Prefer not to disclose <input type="radio"/> 	<p>Agree</p>		

<p>Please indicate the highest education you have obtained.</p> <ul style="list-style-type: none"> <input type="radio"/> Diploma <input type="radio"/> <input type="radio"/> Bachelor's degree <input type="radio"/> <input type="radio"/> Honour's degree <input type="radio"/> <input type="radio"/> Master's degree <input type="radio"/> <input type="radio"/> PhD degree <input type="radio"/> <input type="radio"/> Post-doctoral degree <input type="radio"/> <input type="radio"/> Other (Specify) <input type="radio"/> <p>_____</p>	<p>Agree</p>		
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<p>How many years have you been employed as an educator?</p> <ul style="list-style-type: none"> <input type="radio"/> Less than 1 year <input type="radio"/> 1 – 2 years <input type="radio"/> 3 – 4 years <input type="radio"/> 5- 6 years <input type="radio"/> 7 – 8 years <input type="radio"/> 9 – 10 years <input type="radio"/> More than 10 years <input type="radio"/> Other (Specify) _____ 	Agree		
<p>If you are a high school educator, which grade(s) do you currently teach? (You may select more than one option)</p> <ul style="list-style-type: none"> <input type="radio"/> Grade 8/Form I <input type="radio"/> Grade 9/Form II <input type="radio"/> Grade 10/Form III <input type="radio"/> Grade 11/Form IV <input type="radio"/> Grade 12/Form V <input type="radio"/> N/A 	Agree		

<p>If you are a high school teacher, which subject(s) do you currently teach?</p> <p>_____</p>	Agree		

<p>On average, how many classes do you teach per week?</p> <p>_____</p>	Agree		
<p>On average, how many hours per day do you spend at work (excluding lunch breaks and any extramural activities)?</p> <ul style="list-style-type: none"> <input type="radio"/> Less than 1 hour <input type="radio"/> 2 – 3 hours <input type="radio"/> 4 – 5 hours <input type="radio"/> 6 – 7 hours <input type="radio"/> 8 – 9 hours <input type="radio"/> 10 – 11 hours <input type="radio"/> More than 12 hours 	Agree		

<p>How many hours do you spend per day at your extramural activity?</p> <p>I do not have any</p> <ul style="list-style-type: none"> <input type="radio"/> extramural activities <input type="radio"/> Less than 1 <input type="radio"/> 2 – 3 <input type="radio"/> 4 – 5 <input type="radio"/> 6 – 7 <input type="radio"/> 8 – 9 <input type="radio"/> 10 – 11 	<p>Agree</p>		
<p>On average, how many times per week do you work overtime (time worked in addition to one's normal working hours)?</p> <ul style="list-style-type: none"> <input type="radio"/> Never <input type="radio"/> 1 – 2 times <input type="radio"/> 3 – 4 times <input type="radio"/> 5 – 6 times <input type="radio"/> Everyday 	<p>Agree</p>		

<p>How many hours do you typically spend working overtime (time worked in addition to one's normal working hours) per day?</p> <ul style="list-style-type: none"> ○ None ○ Less than 1 hour ○ 1 – 2 hours ○ 3 – 4 hours ○ 5 – 6 hours ○ 7 – 8 hours ○ More than 8 hours 	Agree		
<p>Are you compensated/incentivised for working overtime (time worked in addition to one's normal working hours)?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	Agree		

SECTION 2: KNOWLEDGE AND PERCEPTION

QUESTION/ITEM	AGREE	DISAGREE	COMMENT
<p>15. Does your place of employment have an existing employee wellness programme or host employee wellness activities? If your answer is</p>	Agree		

<p>"no" or "I'm not sure", please proceed to question 17.</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> I'm not sure</p>			
<p>16. If yes to the previous question, how often do you participate in employee wellness activities?</p> <p><input type="radio"/> Never <input type="radio"/></p> <p><input type="radio"/> Rarely <input type="radio"/></p> <p><input type="radio"/> Sometimes <input type="radio"/></p> <p><input type="radio"/> Often</p> <p><input type="radio"/> Always</p>	Agree		
<p>17. Have you ever received information regarding employee wellness from your place of employment? If your answer is "no" or "I'm not sure", proceed to question 19.</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>I'm not sure</p>	Agree		

<p>18. If yes to the previous question, how often do you receive information pertaining to employee wellness programmes?</p> <p>o Daily o Weekly o Monthly o Quarterly o Other (Specify) _____</p>	<p>Agree</p>		
<p>19. How would you rate your knowledge of employee wellness programmes?</p> <p>o Poor o Fair o Good o Very good o Excellent</p>	<p>Agree</p>		<p>I would like to see these next few questions at the start of the knowledge and perception section. You may disagree and have placed questions 19-23 in their current position for a specific reason.</p> <p>My view is that I would like to get an indication of what they perceive wellness to be before answering questions 15 to 18.</p>
<p>20. In your own words, please describe your understanding of an employee wellness programme.</p> <p>_____</p>	<p>Agree</p>		<p>As per the comments above</p>

<p>21. What do you think the benefits of an employee wellness programme are? (You may select more than one option)</p> <ul style="list-style-type: none"> ○ Improve employee general health and wellbeing ○ Improve employee job satisfaction ○ Improve employee performance ○ Improve worker productivity and efficiency ○ Improve organisational performance ○ Improve employee engagement (decrease presenteeism) ○ Reduce workplace nonattendance (absenteeism) ○ Other (Specify) _____ ○ There are no benefits 	Agree		As per the comments above

<p>22. The use of services provided by the wellness programme can help improve employee health and increase worker productivity.</p> <p> <input type="radio"/> Strongly disagree <input type="radio"/> Disagree <input type="radio"/> Uncertain/neutral <input type="radio"/> Agree <input type="radio"/> Strongly agree </p>			<p>As per the comments above</p>
<p>23. The workplace can be a valuable source of information on employee health and wellbeing.</p> <p> <input type="radio"/> Strongly disagree <input type="radio"/> Disagree <input type="radio"/> Uncertain/neutral <input type="radio"/> Agree <input type="radio"/> Strongly agree </p>			<p>As per the comments above</p>

SECTION 3: ATTITUDES

QUESTION/ITEM	AGREE	DISAGREE	COMMENT
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<p>24. If your place of work has an employee wellness programme: I am benefitting from the services and activities of the employee wellness programme. If not, move to question 26.</p> <p> <input type="radio"/> Strongly disagree <input type="radio"/> Disagree <input type="radio"/> Uncertain/neutral <input type="radio"/> Agree <input type="radio"/> Strongly agree </p>	<p>Agree</p>		<p>I found the next 3 questions a bit awkward to read. I am not sure if it is just me. Just a thought, see my sample below.</p> <p><i>If your place of work has an employee wellness programme, rate the following statement: "I am benefitting from the services and activities of the employee wellness programme." If not, move to question 26.</i></p>
<p>25. If your place of work does not have an employee wellness programme: I would benefit from an employee wellness programme, should it be implemented.</p> <p> <input type="radio"/> Strongly disagree <input type="radio"/> Disagree <input type="radio"/> Undecided/neutral <input type="radio"/> Agree <input type="radio"/> Strongly disagree </p>	<p>Agree</p>		<p>As per the comments above</p>

<p>26. If your place of work does not have an employee wellness programme: I will engage in employee wellness programme activities and services, should they be implemented at my place of employment.</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> I'm not sure</p>	<p>Agree</p>		<p>As per the comments above</p>
<p>27. There is an advantage in knowing one's health status.</p> <p><input type="radio"/> Strongly disagree <input type="radio"/> Disagree <input type="radio"/> Uncertain/neutral <input type="radio"/> Agree <input type="radio"/> Strongly agree</p>	<p>Agree</p>		
<p>28. It is important to attend seminars and forums and access internet information about employee wellness.</p> <p><input type="radio"/> Strongly disagree <input type="radio"/> Disagree <input type="radio"/> Uncertain/neutral <input type="radio"/> Agree <input type="radio"/> Strongly agree</p>	<p>Agree</p>		

<p>29. Stigma prevents employees from seeking counselling, testing and treatment that can be provided as part of an employee wellness programme.</p> <p> <input type="radio"/> Strongly disagree <input type="radio"/> Disagree <input type="radio"/> Uncertain <input type="radio"/> Agree <input type="radio"/> Strongly agree </p>	<p>Agree</p>		
<p>30. Which of the following wellness programme activities would you engage in should they be made available?</p> <p> <input type="radio"/> Professional and confidential counselling <input type="radio"/> Physical health risk assessments </p>	<p>Agree</p>		

<p>Critical incident and trauma support</p> <ul style="list-style-type: none"> ○ HIV/AIDS and chronic disease management education ○ Recreational activities ○ None of the above 			
<p>31. Are there any barriers that would prevent you from participating in wellness activities? (You may select more than one option)</p> <ul style="list-style-type: none"> ○ Inconvenient time or location ○ I have no time ○ My employer should not be involved in my personal health (privacy) ○ I'm concerned about other employees knowing about my health (confidentiality) ○ Lack of management support ○ My job duties do not allow me to participate ○ Just not interested ○ Other (Specify) 	<p>Agree</p>		

Appendix J: Readability Test Report

READABILITY TEST REPORT

The readability test tool provides a quick and easy way to test readability. The overall readability test result for the questionnaire is 57.6 out of 100. This means that my direct input has an average reading ease of about 57.6 out of 100, further indicating that it should be easily understood by 14 to 15 years old.

Readability Results

Flesch Kincaid Reading Ease: the Flesch Kincaid readability scores are the most widely used measures of readability. This score is based on a ranking scale of 0-100, and the higher your score the better. For most businesses, 65 is a good target. The result of this test for the questionnaire is 57.6.

Grade Level Indicators

Flesch Kincaid Grade Level: The Flesch Kincaid readability scores are the most widely used measures of readability. Your score is based on the American school grade you would need to be in to comprehend the material on a page. 7th grade is a good target.
Grade: 9.4

Gunning Fog Score: the Gunning Fog Score estimates the years of formal education needed to comprehend text on the first reading. Institutions should aim for a 7-8 — anything higher than 12 is too complex for most people to read. Score: 11.2

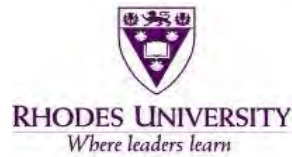
Smog Index: an acronym for simple measure of gobbledygook, the smog index estimates the years of education a person needs to comprehend writing. Score 9.3

Coleman Liau Index: the Coleman Liau Index is designed to evaluate the U.S. grade level necessary to understand text. This score indicates the US school level a person needs to be to understand the text. Score: 8.5

Automated Readability Index: the Automated Readability Index is designed to measure how easy your text is to understand and gives you an estimate of the U.S. grade level necessary to comprehend a passage. Score: 6.5

Considering the level of learning and education required for educators in a private high-school setting, I am satisfied and happy with these readability scores.

Appendix K: Data Collection Tool - Questionnaire



The Perceptions, Knowledge and Attitudes among Private High School Educators in South Africa towards Employee Wellness Programmes.

Dear Participant,

Thank you for agreeing to participate in this study. This study aims to determine educators' perceptions, knowledge and attitudes towards employee wellness programmes. This questionnaire comprises three sections and will take approximately 15 - 20 minutes to complete. Please note that your participation is entirely voluntary and should you at any stage wish to withdraw from participating further, you may do so without any negative consequences.

Please answer as truthfully as possible. Thank you, once again, for your participation!

Section 1: Background and Experience

1. Please specify your age (years).

- 22 – 25
- 26 – 30
- 31 – 35
- 36 – 40
- 41 – 45
- 46 – 50
- 51 years and above

2. Please indicate your sex.

- Male
- Female

- Non-binary
 - Prefer not to disclose.
3. Please indicate the highest education you have obtained.
- Diploma
 - Bachelor's degree
 - Honour's degree
 - Master's degree
 - PhD degree
 - Post-doctoral degree
 - Other (Specify) _____
4. How many years have you been employed as an educator?
- Less than 1 year
 - 1 – 2 years
 - 3 – 4 years
 - 5- 6 years
 - 7 – 8 years
 - 9 – 10 years
 - More than 10 years
 - Other (Specify) _____
5. Which grade(s) do you currently teach? (You may select more than one option)
- Grade 8/Form I
 - Grade 9/Form II
 - Grade 10/Form III
 - Grade 11/Form IV
 - Grade 12/Form V
 - N/A

6. Which subject(s) do you currently teach?

7. On average, how many classes do you teach per week?

8. On average, how many hours per day do you spend at work (excluding lunch breaks and any extramural activities)?

- Less than 1 hour
- 2 – 3 hours
- 4 – 5 hours
- 6 – 7 hours
- 8 – 9 hours
- 10 – 11 hours
- More than 12 hours.

9. On average, how many hours do you spend at your extramural activity per day?

- I do not have any extramural activities
- Less than 1
- 2 – 3
- 4 – 5
- 6 – 7
- 8 – 9
- 10 – 11

10. On average, how many times per week do you work overtime (time worked in addition to one's normal working hours)?

- Never
- 1 – 2 times
- 3 – 4 times
- 5 – 6 times Everyday

11. How many hours do you typically spend working overtime (time worked in addition to one's normal working hours) per day?

- None
- Less than 1 hour
- 1 – 2 hours
- 3 – 4 hours
- 5 – 6 hours
- 7 – 8 hours
- More than 8 hours.

12. Are you compensated/incentivised for working overtime (time worked in addition to one's normal working hours)?

- Yes
- No

Section 2: Knowledge and Perceptions

13. How would you rate your knowledge of employee wellness programmes?

- Poor
- Fair
- Good
- Very good
- Excellent

14. Please describe your understanding (definition) of an employee wellness programme.

15. What do you think the benefits of an employee wellness programme are? (You may select more than one option)

- Improve employee general health and wellbeing
- Improve employee job satisfaction

- Improve employee performance
- Improve worker productivity and efficiency
- Improve organisational performance
- Improve employee engagement (decrease presenteeism)
- Reduce workplace non-attendance (absenteeism)
- Other (Specify) _____ There are no benefits.

16. Employee wellness programmes in the education sector should consider and address the following: (you may select more than one option).

- Spiritual wellness
- Occupational wellness
- Emotional wellness
- Intellectual wellness
- Social wellness
- Physical wellness
- It depends on the institution Other (Specify) _____

17. The use of services provided by the wellness programme can help improve employee health and increase worker productivity.

- Strongly disagree
- Disagree
- Uncertain/ neutral
- Agree
- Strongly agree

18. Does your place of employment have an existing employee wellness programme or host employee wellness activities? If your answer is “no” or “I’m not sure”, proceed to question 22.

- Yes
- No
- I'm not sure

19. If yes to the previous question, how often do you participate in employee wellness activities?

- Never
- Rarely
- Sometimes
- Often
- Always

20. Have you ever received information regarding employee wellness from your place of employment? If your answer is "no" or "I'm not sure", proceed to question 24.

- Yes
- No
- I'm not sure

21. If yes to the previous question, how often do you receive information pertaining to employee wellness programmes?

- Daily
- Weekly
- Monthly
- Quarterly
- Other (Specify) _____

22. The workplace can be a valuable source of information on employee health and wellbeing.

- Strongly disagree
- Disagree
- Uncertain/ neutral
- Agree
- Strongly agree

Section 3: Attitudes

23. If your place of employment has an employee wellness programme, rate the following statement: "I am benefitting from the services and activities of the

employee wellness programme.” If your place of employment does not have a wellness programme, proceed to the next question.

- Strongly disagree
- Disagree
- Uncertain/ neutral
- Agree
- Strongly agree
- N/A

24. If your place of employment does not have an employee wellness programme, rate the following statement: “I would benefit from an employee wellness programme, should it be implemented.”

- Strongly disagree
- Disagree
- Undecided/neutral
- Agree
- Strongly disagree
- N/A

25. If your place of employment does not have an employee wellness programme, rate the following statement: “I will engage in employee wellness programme activities and services should they be implemented at my place of employment.”

- Yes No
- I’m not sure
- N/A

26. There is an advantage in knowing one's health status.

- Strongly disagree
- Disagree
- Uncertain/ neutral
- Agree
- Strongly agree

27. It is important to attend seminars and forums and access internet information about employee wellness.

- Strongly disagree
- Disagree
- Uncertain/ neutral
- Agree
- Strongly agree

28. Stigma prevents employees from seeking counselling, testing and treatment that can be provided as part of an employee wellness programme.

- Strongly disagree
- Disagree
- Uncertain
- Agree
- Strongly agree

29. Which of the following wellness programme activities would you engage in should they be made available to you? (You may select more than one option)

- Professional and confidential counselling
- Physical health risk assessments
- Critical incident and trauma support
- HIV/AIDS and chronic disease management education
- Recreational activities None of the above

30. Are there any barriers that would prevent you from participating in wellness activities? (You may select more than one option)

- Inconvenient time or location
- I have no time
- My employer should not be involved in my personal health (privacy)
- I'm concerned about other employees knowing about my health (confidentiality)
- Lack of management support

- My job duties do not allow me to participate
- Just not interested
- Other (Specify)

Appendix L: Raw Statistical Data

```
knitr::opts_chunk$set(echo = TRUE)
```

Outline

This report presents the process and results of the analyses conducted for the investigation perceptions, knowledge and attitudes toward wellness programs.

The data needed to be modified to allow for multiple regression models. The independent variables should be categorical and the dependent variables should be numeric. Due to the sample size, the categories of all the independent variables needed to be merged strategically to maximise the power of the models while maintaining the relevance of the categories. There were also missing values which should be treated differently depending on the context. After consulting with the author, the dependent variables were appropriately transformed from qualitative to quantitative (numeric) variables. This process of preparing the data is known as data cleaning.

Once the data were appropriately modified, the linear regression models were run where the four independent variables were predictors of each of the dependent variables in a separate model. For a thematic overview, the sum and mean of perception & knowledge item responses were utilised as dependent variables for two more models. The same was done for the attitude items.

Import the data

The raw dataframe was imported into R as “reportdata” and the variables (columns) involved in this analysis were selected and compiled into the dataframe “df”.

```
reportdata <- read.csv("C:\\Users\\tamly\\Downloads\\PKAData.csv", h = TRUE, sep  
= ";") #read dataset  
  
dim(reportdata)  
  
## [1] 127 30  
  
head(reportdata)
```

##	age	sex	education	years
## 1	26 - 30	Female	Bachelor's Degree	Less than 1 year
## 2	26 - 30	Female	Honour's Degree	5 - 6 years
## 3	26 - 30	Female	Honour's Degree	3 - 4 years
## 4	26 - 30	Female	Honour's Degree	7 - 8 years
## 5	26 - 30	Male	Bachelor's Degree	3 - 4 years
## 6	26 - 30	Male	Other	1 - 2 years
##	grades			
## 1	Grade 8/Form I, Grade 9/Form II, Grade 10/Form III			
## 2	Grade 8/Form I, Grade 10/Form III, Grade 11/Form IV, Grade 12/Form IV			
## 3	Grade 8/Form I, Grade 9/Form II, Grade 11/Form IV, Grade 12/Form IV			
## 4	Grade 8/Form I, Grade 9/Form II, Grade 10/Form III, Grade 11/Form IV, Grade 12/Form IV			
## 5	Grade 8/Form I, Grade 9/Form II, Grade 10/Form III, Grade 11/Form IV, Grade 12/Form IV			
## 6	Grade 8/Form I, Grade 10/Form III, Grade 11/Form IV, Grade 12/Form IV			
##	subjects	classes	hours	extramural
## 1	Tshivenda and life orientation	20	8 - 9 hours	03-Feb
## 2	Business Studies, EMS and Maths Lit	24	6 - 7 hours	03-Feb
## 3	Life Science and Math Literacy	27	6 - 7 hours	03-Feb
## 4	English Home Language	27	6 - 7 hours	03-Feb
## 5	English	26	8 - 9 hours	03-Feb
## 6	EGD, Drawing Technology	20	6 - 7 hours	03-Feb

daysOvertime hoursOvertime compensate Q13

1 3 - 4 times 1 - 2 hours No Very good

2 3 - 4 times 1 - 2 hours No Fair

3 3 - 4 times 3 - 4 hours No Fair

4 Everyday 3 - 4 hours No Poor

5 5 - 6 times 1 - 2 hours No Poor

6 Everyday 3 - 4 hours No Very good

##

Q14

1

A program intended to improve and promote healthy and safe environment for employees

2

Ensuring that the overall well being of educators are taking care of.

3

4 The school outsources wellness to a company (Reality Wellness), so I don't know what an in house wellness programme would be. I would imagine it would be a programme that supports teacher wellbeing, taking into consideration that teachers are whole people, and not just the service they provide for the company that employs them. I would imagine that there would be an understanding that teachers have families and lives that require their time as much as their work does, without taking away pay for needing to attend to family or personal matters.

5

6

A program dedicated to improve the wellbeing of employees.

##

Q15

1 Improve employee general health and well-being, Improve employee job satisfaction, Improve employee performance, Improve worker productivity and efficiency, Improve organisational performance, Improve employee engagement (decrease presenteeism), Reduce workplace non-attendance (absenteeism)

2 Improve employee general health and well-being, Improve employee job satisfaction, Improve employee performance, Improve worker productivity and efficiency, Improve organisational performance, Improve employee engagement (decrease presenteeism), Reduce workplace non-attendance (absenteeism)

3 Improve employee general health and well-being, Improve employee job satisfaction, Improve employee performance, Improve worker productivity and efficiency, Improve organisational performance, Improve employee engagement (decrease presenteeism)

4 Improve employee general health and well-being, Improve employee job satisfaction, Improve employee performance, Improve worker productivity and efficiency, Improve organisational performance

5 Improve employee general health and well-being, Improve employee job satisfaction, Improve employee performance

6 Improve employee general health and well-being, Improve employee job satisfaction, Improve employee performance, Improve worker productivity and efficiency, Improve organisational performance, Improve employee engagement (decrease presenteeism), Reduce workplace non-attendance (absenteeism)

Q16

1 Emotional wellness, Social wellness, Physical wellness

2 Spiritual wellness, Occupational wellness, Emotional wellness, Intellectual wellness, Social wellness, Physical wellness

3 Spiritual wellness, Occupational wellness, Emotional wellness, Intellectual wellness, Social wellness, Physical wellness

4 Occupational wellness, Emotional wellness, Intellectual wellness, Social wellness

5 Spiritual wellness, Occupational wellness, Emotional wellness, Intellectual wellness, Social wellness, Physical wellness

6 Spiritual wellness, Occupational wellness, Emotional wellness, Intellectual wellness, Social wellness, Physical wellness, It depends on the institution

##	Q17	Q18	Q19	Q20	Q21	Q22
## 1	Agree	Yes	Often	Yes Weekly		Agree
## 2	Agree	I'm not sure		I'm not sure		Uncertain/neutral
## 3	Agree	Yes	Never	Yes Weekly		Agree
## 4	Agree	Yes	Sometimes	Yes Weekly		Agree
## 5	Agree	I'm not sure		No		Agree
## 6	Strongly agree	Yes	Often	Yes Weekly		Strongly agree

##	Q23	Q24	Q25	Q26	Q27
## 1	Agree			Uncertain/neutral	Agree
## 2	Uncertain/neutral	Agree	I'm not sure	Strongly agree	Neutral
## 3	Disagree	N/A	N/A	Agree	Neutral
## 4	Agree	N/A	N/A	Agree	Neutral
## 5		Strongly Agree	Yes	Agree	Agree
## 6	Agree	N/A	N/A	Strongly agree	

Q28
1 Uncertain/neutral

2 Agree

3 Agree

4 Strongly agree

5 Agree

6 Agree

##

Q29

1 Professional and confidential counselling, Physical health risk assessments, Critical incident and trauma support, HIV/AIDS and chronic disease management education, Recreational activities

2 Professional and confidential counselling, Physical health risk assessments, Critical incident and trauma support, Recreational activities

3 Professional and confidential counselling, Physical health risk assessments

4 Professional and confidential counselling, Critical incident and trauma support

5 Professional and confidential counselling, Physical health risk assessments, Critical incident and trauma support, Recreational activities

6 Professional and confidential counselling, Physical health risk assessments, Critical incident and trauma support, HIV/AIDS and chronic disease management education, Recreational activities

##

Q30

1 inconvenient time or location

2 inconvenient time or location, I have no time, My employer should not be involved in my personal health (privacy), I'm concerned about other employees knowing about my health (confidentiality), Lack of management support, My job duties do not allow me to participate

3

inconvenient time or location, I have no time, I'm concerned about other employees knowing about my health (confidentiality)

4

I have no time, Lack of management support, My job duties do not allow me to participate

5

inconvenient time or location, I have no time

6

inconvenient time or location

```
df <- reportdata[, c(1:4, 13, 17:28)]
```

```
dim(df)
```

```
## [1] 127 17
```

```
head(df)
```

##	age	sex	education	years	Q13	Q17
## 1	26 - 30	Female	Bachelor's Degree	Less than 1 year	Very good	Agree
## 2	26 - 30	Female	Honour's Degree	5 - 6 years	Fair	Agree
## 3	26 - 30	Female	Honour's Degree	3 - 4 years	Fair	Agree
## 4	26 - 30	Female	Honour's Degree	7 - 8 years	Poor	Agree
## 5	26 - 30	Male	Bachelor's Degree	3 - 4 years	Poor	Agree
## 6	26 - 30	Male	Other	1 - 2 years	Very good	Strongly agree

##	Q18	Q19	Q20	Q21	Q22
## 1	Yes	Often	Yes	Weekly	Agree
## 2	I'm not sure		I'm not sure		Uncertain/neutral
## 3	Yes	Never	Yes	Weekly	Agree
## 4	Yes	Sometimes	Yes	Weekly	Agree

```

## 5 I'm not sure          No          Agree
## 6      Yes  Often      Yes Weekly  Strongly agree
##          Q23      Q24      Q25          Q26  Q27
## 1      Agree          Uncertain/neutral  Agree
## 2 Uncertain/neutral      Agree I'm not sure  Strongly agree Neutral
## 3      Disagree      N/A      N/A          Agree Neutral
## 4      Agree      N/A      N/A          Agree Neutral
## 5          Strongly Agree      Yes          Agree  Agree
## 6      Agree      N/A      N/A  Strongly agree
##          Q28
## 1 Uncertain/neutral
## 2      Agree
## 3      Agree
## 4  Strongly agree
## 5      Agree
## 6      Agree

```

Independent variables

Age

```

# Age
unique(df$age)
## [1] "26 - 30"      "31 - 35"      "36 - 40"
## [4] "41 - 45"      "46 - 50"      "51 years and above"
## [7] "#DIV/0!"      ""
df$age[df$age == '26 - 30'] <- 'upto40'

```

```

df$age[df$age == '31 - 35'] <- 'upto40'
df$age[df$age == '36 - 40'] <- 'upto40'
df$age[df$age == '41 - 45'] <- 'over40'
df$age[df$age == '46 - 50'] <- 'over40'
df$age[df$age == '51 years and above'] <- 'over40'

table(df$age)

##
##      #DIV/0! over40 upto40
##      1      1      72      53
df <- df[df$age != "#DIV/0!", ]
df <- df[df$age != "", ]
table(df$age)

##
## over40 upto40
##      72      53
df$age <- factor(df$age, levels = c('upto40', 'over40'))
str(df$age)

## Factor w/ 2 levels "upto40","over40": 1 1 1 1 1 1 1 1 1 1 ...

```

Sex

```

unique(df$sex)

## [1] "Female"      "Male"      "Prefer not to disclose"
df <- df[df$sex != "Prefer not to disclose", ]
df$sex <- factor(df$sex, levels=c("Male", "Female"))

```

```

(df$sex)

## [1] Female Female Female Female Male Male Female Female Male Male
## [11] Female Male Male Male Male Female Male Male Female Male
## [21] Female Female Male Female Female Female Female Male Male Male
## [31] Female Female Female Female Male Female Female Female Female Female
ale
## [41] Male Male Male Female Female Female Female Female Female Male
## [51] Female Male Female Female Male Male Male Female Female Female
## [61] Female Male Female Female Male Male Female Male Male Female
## [71] Male Male Female Male Male Male Male Female Female Female
## [81] Female Female Female Female Female Female Female Male Male Male
## [91] Female Male Male Female Male Male Male Male Female Male
## [101] Male Female Male Female Female Female Male Female Male Female
## [111] Female Female Female Female Male Female Male Male Female Female
e
## [121] Female Female Female

## Levels: Male Female

```

Education

```

unique(df$education)

## [1] "Bachelor's Degree" "Honour's Degree" "Other"
## [4] "Master's Degree" "Diploma" "PhD Degree"

df$education[df$education == "Bachelor's Degree"] <- "Other"
df$education[df$education == "Other"] <- "Other"
df$education[df$education == "Diploma"] <- "Other"
df$education[df$education == "Honour's Degree"] <- "Postgrad"

```

```

df$education[df$education == "Master's Degree"] <- "Postgrad"
df$education[df$education == "PhD Degree"] <- "Postgrad"
df$education <- factor(df$education,
                       levels=c("Other", "Postgrad"))
str(df$education)
## Factor w/ 2 levels "Other","Postgrad": 1 2 2 2 1 1 2 2 1 1 ...
table(df$education)
##
##   Other Postgrad
##    66    57

```

Employment

```

unique(df$years)
## [1] "Less than 1 year" "5 - 6 years" "3 - 4 years"
## [4] "7 - 8 years" "1 - 2 years" ""
## [7] "9 - 10 years" "More than 10 years"
df$years[df$years == ""] <- "upto10" #26-30 yrs old therefore under 10 yrs working
df$years[df$years == "Less than 1 year"] <- "upto10"
df$years[df$years == "1 - 2 years"] <- "upto10"
df$years[df$years == "3 - 4 years"] <- "upto10"
df$years[df$years == "5 - 6 years"] <- "upto10"
df$years[df$years == "7 - 8 years"] <- "upto10"
df$years[df$years == "9 - 10 years" ] <- "upto10"
df$years[df$years == "More than 10 years" ] <- "over10"
df$years <- factor(df$years,

```

```

      levels=c("upto10", "over10"))

str(df$years)

## Factor w/ 2 levels "upto10","over10": 1 1 1 1 1 1 1 1 1 1 ...

table(df$years)

##

## upto10 over10

##   29   94

saveRDS(df, "df.rds")

df <- readRDS("df.rds")

dim(df)

## [1] 123 17

```

Dependent variables

The dependent variables were each modeled such that age, sex, education and years were predictors of each of the dependent variables. ANOVA was conducted to identify statistically significant differences between the independent variable categories in terms of the relevant dependent variable

Q13

```

unique(df$Q13)

## [1] "Very good" "Fair"   "Poor"   "Good"   "Excellent"

df$Q13[df$Q13 == "Poor"] <- 1

df$Q13[df$Q13 == "Fair"] <- 2

df$Q13[df$Q13 == "Good"] <- 3

df$Q13[df$Q13 == "Very good"] <- 4

df$Q13[df$Q13 == "Excellent"] <- 5

```

```

str(df$Q13)

## chr [1:123] "4" "2" "2" "1" "1" "4" "2" "1" "4" "3" "3" "1" "1" "2" "3" ...

df$Q13 <- as.numeric(df$Q13)

table(df$Q13)

##

## 1 2 3 4 5

## 34 39 35 14 1

df13 <- df[!is.na(df$Q13), ]

mod13 <- lm(Q13 ~ age + sex + education + years, data = df13)

summary(mod13)

##

## Call:
## lm(formula = Q13 ~ age + sex + education + years, data = df13)

##

## Residuals:
##   Min     1Q  Median     3Q    Max
## -1.5337 -0.9778 -0.1324  0.6892  2.3196

##

## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)    2.4496    0.2353  10.413 <2e-16 ***
## ageover40      -0.2229    0.2215  -1.006  0.3163
## sexFemale      -0.1467    0.1846  -0.795  0.4284
## educationPostgrad -0.3251    0.1839  -1.768  0.0796 .
## yearover10     0.2308    0.2568  0.899  0.3707

```

```

## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 1.009 on 118 degrees of freedom
## Multiple R-squared:  0.04452,    Adjusted R-squared:  0.01214
## F-statistic: 1.375 on 4 and 118 DF,  p-value: 0.2469
anova(mod13)
## Analysis of Variance Table
##
## Response: Q13
##      Df Sum Sq Mean Sq F value Pr(>F)
## age      1  0.466  0.4665  0.4584 0.49970
## sex      1  0.728  0.7275  0.7149 0.39953
## education 1  3.580  3.5799  3.5179 0.06318 .
## years    1  0.822  0.8218  0.8075 0.37068
## Residuals 118 120.079  1.0176
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
mod13education <- lm(Q13 ~ education, data = df13)
mod13education
##
## Call:
## lm(formula = Q13 ~ education, data = df13)
##
## Coefficients:

```

```

## (Intercept) educationPostgrad
##      2.4242      -0.3541
summary(mod13education)
##
## Call:
## lm(formula = Q13 ~ education, data = df13)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -1.42424 -1.07018 -0.07018  0.57576  2.57576
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)      2.4242   0.1235  19.627 <2e-16 ***
## educationPostgrad -0.3541   0.1814  -1.951  0.0533 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 1.003 on 121 degrees of freedom
## Multiple R-squared:  0.03051, Adjusted R-squared:  0.0225
## F-statistic: 3.808 on 1 and 121 DF, p-value: 0.05332
anova(mod13education)
## Analysis of Variance Table
##
## Response: Q13

```

```

##           Df Sum Sq Mean Sq F value Pr(>F)
## education  1  3.834  3.8343  3.8078 0.05332 .
## Residuals 121 121.841  1.0069
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

mean(df13$Q13)

## [1] 2.260163

mean(df13$Q13[df13$education == "Other"])

## [1] 2.424242

mean(df13$Q13[df13$education == "Postgrad"])

## [1] 2.070175

```

Q17

```

unique(df$Q17)

## [1] "Agree"          "Strongly agree"  "Disagree"

## [4] "Uncertain/neutral" "Strongly disagree" ""

df$Q17[df$Q17 == "Strongly disagree"] <- 1
df$Q17[df$Q17 == "Disagree"] <- 2
df$Q17[df$Q17 == "Uncertain/neutral"] <- 3
df$Q17[df$Q17 == "Agree"] <- 4
df$Q17[df$Q17 == "Strongly agree"] <- 5
df$Q17 <- as.numeric(df$Q17)

table(df$Q17)

##

##  1  2  3  4  5

```

```

## 7 2 14 71 28

str(df$Q17)

## num [1:123] 4 4 4 4 4 5 4 5 4 4 ...

df17 <- df[df$Q17 != 0, ]

df17 <- df17[!is.na(df17$Q17), ]

table(df17$Q17)

##

## 1 2 3 4 5

## 7 2 14 71 28

str(df17$Q17)

## num [1:122] 4 4 4 4 4 5 4 5 4 4 ...

mod17 <- lm(Q17 ~ age + sex + education + years, data = df17)

mod17

##

## Call:

## lm(formula = Q17 ~ age + sex + education + years, data = df17)

##

## Coefficients:

## (Intercept)    ageover40    sexFemale educationPostgrad

## 3.58790      0.09447      0.12119      -0.02618

## yearover10

## 0.27345

summary(mod17)

##

## Call:

```

```

## lm(formula = Q17 ~ age + sex + education + years, data = df17)
##
## Residuals:
##   Min     1Q  Median     3Q    Max
## -3.05082 -0.07700  0.04418  0.43173  1.41210
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)    3.58790   0.22504  15.943 <2e-16 ***
## ageover40      0.09447   0.21207   0.445  0.657
## sexFemale      0.12119   0.17759   0.682  0.496
## educationPostgrad -0.02618  0.17679 -0.148  0.883
## yearsover10    0.27345   0.24571   1.113  0.268
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.965 on 117 degrees of freedom
## Multiple R-squared:  0.02733,   Adjusted R-squared:  -0.005922
## F-statistic: 0.8219 on 4 and 117 DF,  p-value: 0.5137
anova(mod17)
## Analysis of Variance Table
##
## Response: Q17
##           Df Sum Sq Mean Sq F value Pr(>F)
## age       1  1.381  1.38075  1.4828 0.2258

```

```
## sex      1  0.459 0.45874 0.4926 0.4841
## education 1  0.069 0.06859 0.0737 0.7866
## years    1  1.153 1.15328 1.2385 0.2680
## Residuals 117 108.947 0.93117
```

Q18

```
unique(df$Q18)
## [1] "Yes"      "I'm not sure" "No"      ""
df$Q18[df$Q18 == "No"] <- 1
df$Q18[df$Q18 == "I'm not sure"] <- 3
df$Q18[df$Q18 == "Yes"] <- 5
df$Q18 <- as.numeric(df$Q18)
table(df$Q18)
##
## 1 3 5
## 31 28 63
str(df$Q18)
## num [1:123] 5 3 5 5 3 5 5 1 3 5 ...
df18 <- df[df$Q18 != 0, ]
df18 <- df18[!is.na(df18$Q18), ]
table(df18$Q18)
##
## 1 3 5
## 31 28 63
str(df18$Q18)
```

```

## num [1:122] 5 3 5 5 3 5 5 1 3 5 ...
mod18 <- lm(Q18 ~ age + sex + education + years, data = df18)

mod18

##

## Call:
## lm(formula = Q18 ~ age + sex + education + years, data = df18)
##

## Coefficients:
## (Intercept)      ageover40      sexFemale educationPostgrad
## 3.807429      0.041367      -0.092918      0.002671
## yearover10
## -0.334287

summary(mod18)

##

## Call:
## lm(formula = Q18 ~ age + sex + education + years, data = df18)
##

## Residuals:
## Min 1Q Median 3Q Max
## -2.810 -1.988 1.190 1.485 1.620

##

## Coefficients:
## Estimate Std. Error t value Pr(>|t|)
## (Intercept) 3.807429 0.398804 9.547 2.55e-16 ***
## ageover40 0.041367 0.374853 0.110 0.912

```

```

## sexFemale      -0.092918  0.312889 -0.297  0.767
## educationPostgrad 0.002671  0.312082  0.009  0.993
## yearsover10    -0.334287  0.434044 -0.770  0.443
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 1.705 on 117 degrees of freedom
## Multiple R-squared:  0.006977, Adjusted R-squared: -0.02697
## F-statistic: 0.2055 on 4 and 117 DF, p-value: 0.9349
anova(mod18)
## Analysis of Variance Table
##
## Response: Q18
##           Df Sum Sq Mean Sq F value Pr(>F)
## age         1  0.35 0.35498  0.1221 0.7274
## sex         1  0.29 0.28506  0.0981 0.7547
## education   1  0.03 0.02508  0.0086 0.9261
## years       1  1.72 1.72390  0.5932 0.4428
## Residuals 117 340.04 2.90630

```

Q19

```

unique(df$Q19)
## [1] "Often"  ""      "Never"  "Sometimes" "Rarely"  "Always"
df$Q19[df$Q19 == "Never"] <- 1
df$Q19[df$Q19 == "Rarely"] <- 2

```

```

df$Q19[df$Q19 == "Sometimes"] <- 3
df$Q19[df$Q19 == "Often"] <- 4
df$Q19[df$Q19 == "Always"] <- 5
df$Q19[df$Q19 == ""] <- 0
df$Q19[is.na(df$Q19)] <- 0

df$Q19

## [1] "4" "0" "1" "3" "0" "4" "2" "0" "0" "4" "5" "0" "4" "4" "0" "0" "0" "2"
## [19] "0" "0" "3" "0" "0" "5" "0" "3" "0" "3" "5" "3" "0" "5" "1" "1" "3" "2"
## [37] "3" "0" "0" "3" "1" "2" "0" "3" "0" "0" "0" "2" "0" "0" "0" "2" "3" "0"
## [55] "3" "0" "3" "0" "3" "1" "3" "3" "0" "2" "3" "1" "3" "4" "4" "3" "2" "0"
## [73] "4" "2" "2" "0" "0" "3" "2" "0" "0" "4" "3" "2" "2" "2" "0" "2" "3" "2"
## [91] "2" "0" "0" "0" "3" "0" "0" "0" "2" "0" "4" "3" "3" "2" "1" "3" "0" "0"
## [109] "1" "0" "3" "1" "0" "0" "0" "3" "2" "3" "2" "0" "5" "0" "0"

df$Q19 <- as.numeric(df$Q19)

table(df$Q19)

##
## 0 1 2 3 4 5
## 50 9 21 28 10 5

str(df$Q19)

## num [1:123] 4 0 1 3 0 4 2 0 0 4 ...

df19 <- df[df$Q19 != 0, ]
df19 <- df19[!is.na(df19$Q19), ]

table(df19$Q19)

##
## 1 2 3 4 5

```

```

## 9 21 28 10 5

str(df19$Q19)

## num [1:73] 4 1 3 4 2 4 5 4 4 2 ...

mod19 <- lm(Q19 ~ age + sex + education + years, data = df19)

mod19

##

## Call:
## lm(formula = Q19 ~ age + sex + education + years, data = df19)
##

## Coefficients:
## (Intercept)    ageover40    sexFemale educationPostgrad
## 3.526730    -0.089193    -0.198178    0.003309
## yearsover10
## -0.791711

summary(mod19)

##

## Call:
## lm(formula = Q19 ~ age + sex + education + years, data = df19)
##

## Residuals:
## Min 1Q Median 3Q Max
## -2.3319 -0.6458 0.2650 0.5490 2.5490
##

## Coefficients:
## Estimate Std. Error t value Pr(>|t|)

```

```

## (Intercept)    3.526730  0.322727 10.928 <2e-16 ***
## ageover40     -0.089193  0.288115 -0.310  0.7578
## sexFemale     -0.198178  0.247859 -0.800  0.4267
## educationPostgrad 0.003309  0.246797  0.013  0.9893
## yearover10    -0.791711  0.337946 -2.343  0.0221 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

##
## Residual standard error: 1.036 on 68 degrees of freedom
## Multiple R-squared:  0.1107, Adjusted R-squared:  0.05836
## F-statistic: 2.115 on 4 and 68 DF, p-value: 0.08831
anova(mod19)

## Analysis of Variance Table

##
## Response: Q19

##      Df Sum Sq Mean Sq F value Pr(>F)
## age      1  2.903  2.9026  2.7048 0.10466
## sex      1  0.287  0.2868  0.2672 0.60686
## education 1  0.002  0.0017  0.0016 0.96834
## years    1  5.890  5.8898  5.4883 0.02208 *
## Residuals 68 72.974  1.0731
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```

Years is statistically significant at 5% significance. Some extra information about Q19 and years is included below.

```

mod19years <- lm(Q19 ~ years, data = df19)

mod19years

##

## Call:
## lm(formula = Q19 ~ years, data = df19)
##

## Coefficients:
## (Intercept)  yearsover10
##  3.3750   -0.8136

summary(mod19years)

##

## Call:
## lm(formula = Q19 ~ years, data = df19)
##

## Residuals:
##  Min    1Q  Median    3Q   Max
## -2.3750 -0.5614  0.4386  0.4386  2.4386

##

## Coefficients:
##           Estimate Std. Error t value Pr(>|t|)
## (Intercept)  3.3750    0.2549  13.243 <2e-16 ***
## yearsover10 -0.8136    0.2884  -2.821  0.0062 **
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```

```
##
## Residual standard error: 1.019 on 71 degrees of freedom
## Multiple R-squared:  0.1008, Adjusted R-squared:  0.08812
## F-statistic: 7.958 on 1 and 71 DF,  p-value: 0.006205
anova(mod19years)

## Analysis of Variance Table

##
## Response: Q19

##      Df Sum Sq Mean Sq F value  Pr(>F)
## years   1  8.270   8.2697   7.9576 0.006205 **
## Residuals 71 73.785   1.0392

## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

mean(df19$Q19)

## [1] 2.739726

mean(df19$Q19[df19$years == "over10"])

## [1] 2.561404

mean(df19$Q19[df19$years == "upto10"])

## [1] 3.375
```

Q20

```
unique(df$Q20)

## [1] "Yes"      "I'm not sure" "No"

df$Q20[df$Q20 == "No"] <- 1

df$Q20[df$Q20 == "I'm not sure"] <- 3
```

```

df$Q20[df$Q20 == "Yes"] <- 5
df$Q20 <- as.numeric(df$Q20)
table(df$Q20)
##
## 1 3 5
## 22 20 81
str(df$Q20)
## num [1:123] 5 3 5 5 1 5 5 1 3 5 ...
df20 <- df[df$Q20 != 0, ]
df20 <- df20[!is.na(df20$Q20), ]
table(df20$Q20)
##
## 1 3 5
## 22 20 81
str(df20$Q20)
## num [1:123] 5 3 5 5 1 5 5 1 3 5 ...
mod20 <- lm(Q20 ~ age + sex + education + years, data = df20)
mod20
##
## Call:
## lm(formula = Q20 ~ age + sex + education + years, data = df20)
##
## Coefficients:
## (Intercept)    ageover40    sexFemale educationPostgrad
##      3.91376      -0.04074      -0.20102      -0.06396

```

```

##   yearsover10
##           0.28148
summary(mod20)
##
## Call:
## lm(formula = Q20 ~ age + sex + education + years, data = df20)
##
## Residuals:
##   Min     1Q  Median     3Q    Max
## -3.1545 -0.9138  0.9095  1.0697  1.3920
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)    3.91376   0.36929  10.598 <2e-16 ***
## ageover40     -0.04074   0.34769  -0.117  0.907
## sexFemale     -0.20102   0.28974  -0.694  0.489
## educationPostgrad -0.06396  0.28864  -0.222  0.825
## yearsover10    0.28148   0.40309   0.698  0.486
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 1.583 on 118 degrees of freedom
## Multiple R-squared:  0.009772, Adjusted R-squared: -0.02379
## F-statistic: 0.2911 on 4 and 118 DF, p-value: 0.8832
anova(mod20)

```

```
## Analysis of Variance Table

##

## Response: Q20

##      Df Sum Sq Mean Sq F value Pr(>F)
## age      1  0.287 0.28694  0.1144 0.7357
## sex      1  1.187 1.18695  0.4734 0.4928
## education 1  0.223 0.22330  0.0891 0.7659
## years    1  1.223 1.22274  0.4876 0.4864
## Residuals 118 295.877 2.50743
```

Q21

```
unique(df$Q21)
## [1] "Weekly" "" "Monthly" "Quarterly"

df$Q21[df$Q21 == ""] <- 1
df$Q21[df$Q21 == "Quarterly"] <- 2
df$Q21[df$Q21 == "Monthly"] <- 3
df$Q21[df$Q21 == "Weekly"] <- 4
df$Q21[df$Q21 == "Daily"] <- 5
df$Q21 <- as.numeric(df$Q21)

table(df$Q21)

##
## 1 2 3 4
## 40 22 38 23

str(df$Q21)

## num [1:123] 4 1 4 4 1 4 4 1 1 4 ...
```

```

df21 <- df[df$Q21 != 0, ]
df21 <- df21[!is.na(df21$Q21), ]
table(df21$Q21)
##
## 1 2 3 4
## 40 22 38 23
str(df21$Q21)
## num [1:123] 4 1 4 4 1 4 4 1 1 4 ...
mod21 <- lm(Q21 ~ age + sex + education + years, data = df21)
mod21
##
## Call:
## lm(formula = Q21 ~ age + sex + education + years, data = df21)
##
## Coefficients:
## (Intercept)      ageover40      sexFemale educationPostgrad
##      2.52337      0.02673      0.06150      -0.22023
##      yearover10
##      -0.15013
summary(mod21)
##
## Call:
## lm(formula = Q21 ~ age + sex + education + years, data = df21)
##
## Residuals:

```

```

##   Min   1Q Median   3Q   Max
## -1.5849 -1.2412 -0.1797  0.7721  1.8203
##
## Coefficients:
##           Estimate Std. Error t value Pr(>|t|)
## (Intercept)    2.52337   0.26504   9.521 2.74e-16 ***
## ageover40      0.02673   0.24954   0.107  0.915
## sexFemale      0.06150   0.20795   0.296  0.768
## educationPostgrad -0.22023  0.20716  -1.063  0.290
## yearsover10    -0.15013   0.28930  -0.519  0.605
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 1.136 on 118 degrees of freedom
## Multiple R-squared:  0.01201,   Adjusted R-squared:  -0.02148
## F-statistic: 0.3587 on 4 and 118 DF,  p-value: 0.8375
anova(mod21)
## Analysis of Variance Table
##
## Response: Q21
##           Df Sum Sq Mean Sq F value Pr(>F)
## age         1  0.103  0.10330  0.0800 0.7778
## sex         1  0.076  0.07615  0.0590 0.8086
## education   1  1.326  1.32584  1.0265 0.3131
## years       1  0.348  0.34785  0.2693 0.6048

```

```
## Residuals 118 152.407 1.29159
```

Q22

```
unique(df$Q22)
## [1] "Agree"      "Uncertain/neutral" "Strongly agree"
## [4] "Disagree"     "Strongly disagree" ""
df$Q22[df$Q22 == "Strongly disagree"] <- 1
df$Q22[df$Q22 == "Disagree"] <- 2
df$Q22[df$Q22 == "Uncertain/neutral"] <- 3
df$Q22[df$Q22 == "Agree"] <- 4
df$Q22[df$Q22 == "Strongly agree"] <- 5
df$Q22 <- as.numeric(df$Q22)
table(df$Q22)
##
## 1 2 3 4 5
## 6 7 21 73 15
str(df$Q22)
## num [1:123] 4 3 4 4 4 5 3 5 4 3 ...
df22 <- df[df$Q22 != 0, ]
df22 <- df22[!is.na(df22$Q22), ]
table(df22$Q22)
##
## 1 2 3 4 5
## 6 7 21 73 15
str(df22$Q22)
```

```

## num [1:122] 4 3 4 4 4 5 3 5 4 3 ...
mod22 <- lm(Q22 ~ age + sex + education + years, data = df22)

mod22

##

## Call:
## lm(formula = Q22 ~ age + sex + education + years, data = df22)

##

## Coefficients:
## (Intercept)      ageover40      sexFemale educationPostgrad
##      3.1951      0.1561      0.3858      -0.1123
##      yearover10
##      0.3024

summary(mod22)

##

## Call:
## lm(formula = Q22 ~ age + sex + education + years, data = df22)

##

## Residuals:
##      Min       1Q   Median       3Q      Max
## -2.6536 -0.1670  0.1167  0.4587  1.8049

##

## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)    3.1951    0.2135  14.965 <2e-16 ***
## ageover40      0.1561    0.2009  0.777  0.4387

```

```

## sexFemale      0.3858  0.1679  2.298  0.0233 *
## educationPostgrad -0.1123  0.1670 -0.673  0.5025
## yearsover10     0.3024  0.2324  1.301  0.1957
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

##
## Residual standard error: 0.913 on 117 degrees of freedom
## Multiple R-squared:  0.0813, Adjusted R-squared:  0.04989
## F-statistic: 2.589 on 4 and 117 DF, p-value: 0.04034

anova(mod22)

## Analysis of Variance Table

##
## Response: Q22

##      Df Sum Sq Mean Sq F value Pr(>F)
## age      1  2.219  2.2186  2.6614 0.10550
## sex      1  4.446  4.4457  5.3330 0.02268 *
## education  1  0.556  0.5555  0.6664 0.41597
## years    1  1.412  1.4115  1.6933 0.19573
## Residuals 117 97.533  0.8336

## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```

Sex significant at 5% significance - extra info provided below.

```

mod22sex <- aov(Q22 ~ sex, data = df22)

mod22sex

```

```

## Call:
##   aov(formula = Q22 ~ sex, data = df22)
##
## Terms:
##           sex Residuals
## Sum of Squares  4.16228 102.00166
## Deg. of Freedom    1    120
##
## Residual standard error: 0.9219619
## Estimated effects may be unbalanced
summary(mod22sex)
##           Df Sum Sq Mean Sq F value Pr(>F)
## sex         1  4.16  4.162  4.897 0.0288 *
## Residuals  120 102.00  0.850
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
anova(mod22sex)
## Analysis of Variance Table
##
## Response: Q22
##           Df Sum Sq Mean Sq F value Pr(>F)
## sex         1  4.162  4.1623  4.8967 0.0288 *
## Residuals  120 102.002  0.8500
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```

```
mean(df22$Q22)
## [1] 3.688525

mean(df22$Q22[df22$sex == "Male"])
## [1] 3.470588

mean(df22$Q22[df22$sex == "Female"])
## [1] 3.84507
```

Q23

```
unique(df$Q23)
## [1] "Agree"
## [2] "Uncertain/neutral"
## [3] "Disagree"
## [4] ""
## [5] "Strongly agree"
## [6] "Place of employment does not have an existing wellness programme."
## [7] "Strongly disagree"

df$Q23[df$Q23 == "Place of employment does not have an existing wellness programme."] <- 0

df$Q23[df$Q23 == "Strongly disagree"] <- 1

df$Q23[df$Q23 == "Disagree"] <- 2

df$Q23[df$Q23 == "Uncertain/neutral"] <- 3

df$Q23[df$Q23 == "Agree"] <- 4

df$Q23[df$Q23 == "Strongly agree"] <- 5

df$Q23 <- as.numeric(df$Q23)

df$Q23[is.na(df$Q23)] <- 0
```

```

table(df$Q23)

##
## 0 1 2 3 4 5
## 37 7 18 37 23 1

str(df$Q23)

## num [1:123] 4 3 2 4 0 4 5 0 2 3 ...

df23 <- df[df$Q23 != 0, ]

df23 <- df23[!is.na(df23$Q23), ]

table(df23$Q23)

##
## 1 2 3 4 5
## 7 18 37 23 1

str(df23$Q23)

## num [1:86] 4 3 2 4 4 5 2 3 1 3 ...

mod23 <- lm(Q23 ~ age + sex + education + years, data = df23)

mod23

##
## Call:
## lm(formula = Q23 ~ age + sex + education + years, data = df23)
##
## Coefficients:
## (Intercept)      ageover40      sexFemale educationPostgrad
##      3.02644      0.16951      0.11328      -0.05356
##      yearover10
##      -0.33128

```

```

summary(mod23)

##

## Call:
## lm(formula = Q23 ~ age + sex + education + years, data = df23)
##

## Residuals:
##      Min       1Q   Median       3Q      Max
## -2.13971 -0.81043  0.07562  0.84623  1.91385
##

## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)    3.02644    0.24843  12.182 <2e-16 ***
## ageover40      0.16951    0.24645   0.688  0.494
## sexFemale      0.11328    0.20259   0.559  0.578
## educationPostgrad -0.05356    0.20371  -0.263  0.793
## yearsover10   -0.33128    0.27444  -1.207  0.231
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

##

## Residual standard error: 0.9348 on 81 degrees of freedom
## Multiple R-squared:  0.02278,    Adjusted R-squared:  -0.02548
## F-statistic: 0.472 on 4 and 81 DF,  p-value: 0.7562

anova(mod23)

## Analysis of Variance Table

##

```

```
## Response: Q23
```

```
##      Df Sum Sq Mean Sq F value Pr(>F)
## age   1  0.000  0.00023  0.0003 0.9870
## sex   1  0.352  0.35180  0.4026 0.5275
## education 1  0.024  0.02430  0.0278 0.8680
## years  1  1.273  1.27333  1.4572 0.2309
## Residuals 81 70.781 0.87383
```

Q24

```
unique(df$Q24)
## [1] ""          "Agree"        "N/A"
## [4] "Strongly Agree" "Undecided/neutral" "Strongly disagree"
## [7] "Disagree"
df$Q24[df$Q24 == ""] <- 0
df$Q24[df$Q24 == "N/A"] <- 0
df$Q24[df$Q24 == "Strongly disagree"] <- 1
df$Q24[df$Q24 == "Disagree"] <- 2
df$Q24[df$Q24 == "Undecided/neutral"] <- 3
df$Q24[df$Q24 == "Agree"] <- 4
df$Q24[df$Q24 == "Strongly Agree"] <- 5
df$Q24 <- as.numeric(df$Q24)
table(df$Q24)
##
## 0 1 2 3 4 5
## 46 3 2 18 40 14
```

```

str(df$Q24)

## num [1:123] 0 4 0 0 5 0 0 5 4 0 ...

df24 <- df[df$Q24 != 0, ]

df24 <- df24[!is.na(df24$Q24), ]

table(df24$Q24)

##

## 1 2 3 4 5

## 3 2 18 40 14

mod24 <- aov(Q24 ~ age + sex + education + years, data = df24)

mod24

## Call:
## aov(formula = Q24 ~ age + sex + education + years, data = df24)
##

## Terms:
##          age      sex education  years Residuals
## Sum of Squares  0.00433  0.30574  1.52202  0.00457  61.41009
## Deg. of Freedom    1      1      1      1      72

##

## Residual standard error: 0.9235356

## Estimated effects may be unbalanced

summary(mod24)

##          Df Sum Sq Mean Sq F value Pr(>F)
## age          1  0.00  0.0043  0.005  0.943
## sex          1  0.31  0.3057  0.358  0.551
## education    1  1.52  1.5220  1.784  0.186

```

```

## years      1  0.00 0.0046  0.005 0.942

## Residuals 72 61.41 0.8529

#this model includes responses from subjects who have a wellness program and res
ponded to item 24.

anova(mod24)

## Analysis of Variance Table

##

## Response: Q24

##      Df Sum Sq Mean Sq F value Pr(>F)
## age      1  0.004 0.00433  0.0051 0.9434
## sex      1  0.306 0.30574  0.3585 0.5512
## education 1  1.522 1.52202  1.7845 0.1858
## years    1  0.005 0.00457  0.0054 0.9419
## Residuals 72 61.410 0.85292

```

Q25

```

unique(df$Q25)

## [1] ""      "I'm not sure" "N/A"      "Yes"      "No"

df$Q25[df$Q25 == "N/A"] <- 0
df$Q25[df$Q25 == "No"] <- 1
df$Q25[df$Q25 == "I'm not sure"] <- 3
df$Q25[df$Q25 == "Yes"] <- 5
df$Q25 <- as.numeric(df$Q25)
df$Q25[is.na(df$Q25)] <- 0
table(df$Q25)

```

```

##
## 0 1 3 5
## 49 4 19 51
str(df$Q25)
## num [1:123] 0 3 0 0 5 0 0 5 5 0 ...
df25 <- df[df$Q25 != 0, ]
df25 <- df25[!is.na(df25$Q25), ]
table(df25$Q25)
##
## 1 3 5
## 4 19 51
mod25 <- lm(Q25 ~ age + sex + education + years, data = df25)
mod25
##
## Call:
## lm(formula = Q25 ~ age + sex + education + years, data = df25)
##
## Coefficients:
## (Intercept)    ageover40    sexFemale educationPostgrad
##      4.53742    -0.07392    -0.00400    -0.21806
##      yearover10
##      -0.14041
summary(mod25)
##
## Call:

```

```

## lm(formula = Q25 ~ age + sex + education + years, data = df25)
##
## Residuals:
##   Min     1Q  Median     3Q    Max
## -3.3191 -1.1750  0.6769  0.7869  0.8990
##
## Coefficients:
##           Estimate Std. Error t value Pr(>|t|)
## (Intercept)   4.53742   0.41261  10.997 <2e-16 ***
## ageover40    -0.07392   0.34936  -0.212  0.833
## sexFemale    -0.00400   0.29158  -0.014  0.989
## educationPostgrad -0.21806  0.29006  -0.752  0.455
## yearsover10  -0.14041   0.46190  -0.304  0.762
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 1.2 on 69 degrees of freedom
## Multiple R-squared:  0.01208,    Adjusted R-squared:  -0.04519
## F-statistic: 0.211 on 4 and 69 DF,  p-value: 0.9315
anova(mod25)
## Analysis of Variance Table
##
## Response: Q25
##           Df Sum Sq Mean Sq F value Pr(>F)
## age       1  0.382 0.38154  0.2649 0.6084

```

```
## sex      1 0.001 0.00081 0.0006 0.9811
## education 1 0.700 0.69992 0.4860 0.4881
## years    1 0.133 0.13309 0.0924 0.7621
## Residuals 69 99.379 1.44028
```

Q26

```
unique(df$Q26)
## [1] "Uncertain/neutral" "Strongly agree" "Agree"
## [4] "Strongly disagree"
df$Q26[df$Q26 == "N/A"] <- 0
df$Q26[df$Q26 == "Strongly disagree"] <- 1
df$Q26[df$Q26 == "Disagree"] <- 2
df$Q26[df$Q26 == "Undecided/neutral"] <- 3
df$Q26[df$Q26 == "Agree"] <- 4
df$Q26[df$Q26 == "Strongly agree"] <- 5
df$Q26 <- as.numeric(df$Q26)
## Warning: NAs introduced by coercion
table(df$Q26)
##
## 1 4 5
## 6 54 53
str(df$Q26)
## num [1:123] NA 5 4 4 4 5 4 5 5 5 ...
df26 <- df[df$Q26 != 0, ]
df26 <- df26[!is.na(df26$Q26), ]
```

```

table(df26$Q26)

##

## 1 4 5

## 6 54 53

#mod26 <- aov(Q26 ~ age + sex + education + years, data = df26)

mod26 <- lm(Q26 ~ age + sex + education + years, data = df26)

anova(mod26)

## Analysis of Variance Table

##

## Response: Q26

##      Df Sum Sq Mean Sq F value Pr(>F)
## age      1  0.126  0.12628  0.1429 0.7062
## sex      1  0.258  0.25791  0.2918 0.5902
## education 1  0.166  0.16609  0.1879 0.6655
## years    1  0.138  0.13815  0.1563 0.6934

## Residuals 108 95.471 0.88399

```

Q27

```

unique(df$Q27)

## [1] "Agree"      "Neutral"     ""

## [4] "Strongly agree" "Disagree"    "Strongly disagree"

df$Q27[df$Q27 == "Strongly disagree"] <- 1

df$Q27[df$Q27 == "Disagree"] <- 2

df$Q27[df$Q27 == "Neutral"] <- 3

df$Q27[df$Q27 == "Agree"] <- 4

```

```

df$Q27[df$Q27 == "Strongly agree"] <- 5
df$Q27 <- as.numeric(df$Q27)
table(df$Q27)
##
## 1 2 3 4 5
## 6 9 33 61 13
str(df$Q27)
## num [1:123] 4 3 3 3 4 NA 3 5 5 4 ...
df27 <- df[df$Q27 != 0, ]
df27 <- df27[!is.na(df27$Q27), ]
table(df27$Q27)
##
## 1 2 3 4 5
## 6 9 33 61 13
str(df27$Q27)
## num [1:122] 4 3 3 3 4 3 5 5 4 5 ...
mod27 <- lm(Q27 ~ age + sex + education + years, data = df27)
mod27
##
## Call:
## lm(formula = Q27 ~ age + sex + education + years, data = df27)
##
## Coefficients:
## (Intercept)    ageover40    sexFemale educationPostgrad
##      3.61452      0.08793      0.12789      -0.17630

```

```

##   yearover10
##   -0.15248
summary(mod27)
##
## Call:
## lm(formula = Q27 ~ age + sex + education + years, data = df27)
##
## Residuals:
##   Min     1Q   Median     3Q    Max
## -2.5500 -0.5621  0.3221  0.4985  1.6263
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)    3.61452   0.23116  15.637 <2e-16 ***
## ageover40      0.08793   0.21168   0.415  0.679
## sexFemale      0.12789   0.17738   0.721  0.472
## educationPostgrad -0.17630  0.17640 -0.999  0.320
## yearover10    -0.15248   0.24755 -0.616  0.539
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.9639 on 117 degrees of freedom
## Multiple R-squared:  0.01449,   Adjusted R-squared: -0.0192
## F-statistic: 0.4302 on 4 and 117 DF,  p-value: 0.7866
anova(mod27)

```

```
## Analysis of Variance Table

##

## Response: Q27

##      Df Sum Sq Mean Sq F value Pr(>F)
## age      1  0.000 0.00008  0.0001 0.9925
## sex      1  0.437 0.43684  0.4702 0.4942
## education 1  0.809 0.80914  0.8710 0.3526
## years    1  0.352 0.35248  0.3794 0.5391
## Residuals 117 108.697 0.92903
```

Q28

```
unique(df$Q28)

## [1] "Uncertain/neutral" "Agree"          "Strongly agree"

## [4] "Disagree"          "Strongly disagree"

df$Q28[df$Q28 == "Strongly disagree"] <- 1
df$Q28[df$Q28 == "Disagree"] <- 2
df$Q28[df$Q28 == "Uncertain/neutral"] <- 3
df$Q28[df$Q28 == "Agree"] <- 4
df$Q28[df$Q28 == "Strongly agree"] <- 5

df$Q28 <- as.numeric(df$Q28)

table(df$Q28)

##

## 1 2 3 4 5
## 4 17 24 63 15

str(df$Q28)
```

```

## num [1:123] 3 4 4 5 4 4 4 2 5 4 ...
df28 <- df[df$Q28 != 0, ]
df28 <- df28[!is.na(df28$Q28), ]
table(df28$Q28)
##
## 1 2 3 4 5
## 4 17 24 63 15
str(df28$Q28)
## num [1:123] 3 4 4 5 4 4 4 2 5 4 ...
mod28 <- lm(Q28 ~ age + sex + education + years, data = df28)
mod28
##
## Call:
## lm(formula = Q28 ~ age + sex + education + years, data = df28)
##
## Coefficients:
## (Intercept)      ageover40      sexFemale educationPostgrad
##      3.83430      -0.32410      -0.01804      -0.19437
##      yearover10
##      0.01146
summary(mod28)
##
## Call:
## lm(formula = Q28 ~ age + sex + education + years, data = df28)
##

```

```

## Residuals:
##   Min    1Q  Median    3Q   Max
## -2.8457 -0.6276  0.1837  0.4964  1.6908
##
## Coefficients:
##           Estimate Std. Error t value Pr(>|t|)
## (Intercept)   3.83430   0.22923  16.727 <2e-16 ***
## ageover40     -0.32410   0.21582  -1.502  0.136
## sexFemale     -0.01804   0.17985  -0.100  0.920
## educationPostgrad -0.19437  0.17917  -1.085  0.280
## yearover10     0.01146   0.25021   0.046  0.964
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.9829 on 118 degrees of freedom
## Multiple R-squared:  0.03718,    Adjusted R-squared:  0.004544
## F-statistic: 1.139 on 4 and 118 DF,  p-value: 0.3415
anova(mod28)
## Analysis of Variance Table
##
## Response: Q28
##           Df Sum Sq Mean Sq F value Pr(>F)
## age         1  3.220  3.2202  3.3331 0.07043 .
## sex         1  0.020  0.0195  0.0202 0.88717
## education   1  1.161  1.1608  1.2015 0.27525

```

```

## years      1  0.002 0.0020 0.0021 0.96356
## Residuals 118 114.004 0.9661
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
saveRDS(df, "pka.rds")
pka <- readRDS("pka.rds")
head(pka)
##   age  sex education  years Q13 Q17 Q18 Q19 Q20 Q21 Q22 Q23 Q24 Q25 Q
26
## 1 upto40 Female   Other upto10  4  4  5  4  5  4  4  4  0  0 NA
## 2 upto40 Female Postgrad upto10  2  4  3  0  3  1  3  3  4  3  5
## 3 upto40 Female Postgrad upto10  2  4  5  1  5  4  4  2  0  0  4
## 4 upto40 Female Postgrad upto10  1  4  5  3  5  4  4  4  0  0  4
## 5 upto40  Male   Other upto10  1  4  3  0  1  1  4  0  5  5  4
## 6 upto40  Male   Other upto10  4  5  5  4  5  4  5  4  0  0  5
##   Q27 Q28
## 1  4  3
## 2  3  4
## 3  3  4
## 4  3  5
## 5  4  4
## 6 NA  4

```

Themes

Perception & knowledge

```

pka$pkmean <- apply(pka[,5:11], 1, mean, na.rm = TRUE)

pka$pkmean

## [1] 4.285714 2.285714 3.571429 3.714286 2.000000 4.571429 3.571429 2.0000
00

## [9] 2.714286 4.000000 4.000000 1.571429 3.000000 3.714286 2.857143 2.5714
29

## [17] 2.142857 3.571429 2.142857 1.857143 3.142857 2.428571 2.000000 3.714
286

## [25] 2.428571 3.285714 2.714286 3.714286 4.285714 3.428571 1.714286 4.428
571

## [33] 3.428571 3.428571 3.571429 3.285714 3.714286 2.142857 2.285714 3.714
286

## [41] 3.000000 3.714286 2.142857 4.000000 2.571429 3.000000 2.571429 3.285
714

## [49] 2.714286 1.571429 2.285714 3.571429 4.142857 2.714286 3.857143 2.857
143

## [57] 3.714286 2.857143 4.142857 3.571429 4.285714 4.142857 1.857143 3.571
429

## [65] 3.714286 3.428571 3.714286 3.000000 4.142857 3.857143 3.714286 1.142
857

## [73] 4.142857 3.428571 3.714286 2.714286 1.857143 3.714286 3.142857 2.285
714

## [81] 2.571429 3.571429 4.000000 3.428571 3.428571 3.142857 1.571429 3.428
571

## [89] 4.000000 3.571429 3.571429 1.571429 2.571429 2.285714 3.428571 1.571
429

## [97] 3.000000 2.285714 3.000000 2.333333 2.000000 3.000000 4.000000 3.428
571

```

```

## [105] 1.571429 3.571429 2.571429 1.833333 2.428571 1.428571 2.714286 2.000
000

## [113] 2.285714 2.428571 3.142857 3.857143 3.571429 4.000000 3.857143 3.285
714

## [121] 4.428571 1.428571 2.000000

pka$pksum <- apply(pka[,5:11], 1, sum, na.rm = TRUE)

pka$pksum

## [1] 30 16 25 26 14 32 25 14 19 28 28 11 21 26 20 18 15 25 15 13 22 17 14 26 1
7

## [26] 23 19 26 30 24 12 31 24 24 25 23 26 15 16 26 21 26 15 28 18 21 18 23 19 1
1

## [51] 16 25 29 19 27 20 26 20 29 25 30 29 13 25 26 24 26 21 29 27 26 8 29 24 2
6

## [76] 19 13 26 22 16 18 25 28 24 24 22 11 24 28 25 25 11 18 16 24 11 21 16 21 1
4

## [101] 12 21 28 24 11 25 18 11 17 10 19 14 16 17 22 27 25 28 27 23 31 10 14

pksummod <- lm(pksum ~ age + sex + education + years, data = pka)

summary(pksummod)

##

## Call:

## lm(formula = pksum ~ age + sex + education + years, data = pka)

##

## Residuals:

##   Min     1Q  Median     3Q    Max

## -13.786 -4.745  1.315  4.479 10.497

##

```

```

## Coefficients:
##           Estimate Std. Error t value Pr(>|t|)
## (Intercept)  21.50303   1.38677  15.506 <2e-16 ***
## ageover40     0.26480   1.30567   0.203  0.840
## sexFemale     0.16441   1.08805   0.151  0.880
## educationPostgrad -1.14514  1.08391 -1.056  0.293
## yearsover10   0.01768   1.51371   0.012  0.991
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

##
## Residual standard error: 5.946 on 118 degrees of freedom
## Multiple R-squared:  0.009889, Adjusted R-squared: -0.02367
## F-statistic: 0.2946 on 4 and 118 DF, p-value: 0.881
anova(pksummod)
## Analysis of Variance Table
##
## Response: pksum
##           Df Sum Sq Mean Sq F value Pr(>F)
## age         1  1.2  1.216  0.0344 0.8532
## sex         1  0.4  0.427  0.0121 0.9127
## education   1 40.0 40.025  1.1319 0.2895
## years       1  0.0  0.005  0.0001 0.9907
## Residuals 118 4172.5 35.360

pkmeanmod <- lm(pkmean ~ age + sex + education + years, data = pka)
summary(pkmeanmod)

```

```

##
## Call:
## lm(formula = pkmean ~ age + sex + education + years, data = pka)
##
## Residuals:
##   Min     1Q   Median     3Q    Max
## -1.9832 -0.6580  0.1744  0.6410  1.4991
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)    3.072340  0.195868  15.686 <2e-16 ***
## ageover40      0.047687  0.184413   0.259  0.796
## sexFemale      0.015593  0.153677   0.101  0.919
## educationPostgrad -0.157543  0.153092  -1.029  0.306
## yearover10     0.006015  0.213796   0.028  0.978
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.8399 on 118 degrees of freedom
## Multiple R-squared:  0.009682, Adjusted R-squared: -0.02389
## F-statistic: 0.2884 on 4 and 118 DF, p-value: 0.885
anova(pkmeanmod)
## Analysis of Variance Table
##
## Response: pkmean

```

```

##           Df Sum Sq Mean Sq F value Pr(>F)
## age       1  0.050 0.05034  0.0714 0.7898
## sex       1  0.003 0.00268  0.0038 0.9510
## education 1  0.760 0.76020  1.0777 0.3013
## years     1  0.001 0.00056  0.0008 0.9776
## Residuals 118 83.236 0.70539

dim(pka)
## [1] 123 19

shapiro.test(pka$pkmean)

##
## Shapiro-Wilk normality test

##
## data:  pka$pkmean
## W = 0.95801, p-value = 0.000738

shapiro.test(pka$pksum)

##
## Shapiro-Wilk normality test

##
## data:  pka$pksum
## W = 0.95541, p-value = 0.0004593

```

Attitudes

```

pka$amean <- apply(pka[,11:16], 1, mean, na.rm = TRUE)

pka$amean

```

[1] 2.400000 3.500000 2.166667 2.500000 3.666667 2.800000 2.500000 4.166667

[9] 4.166667 2.500000 2.166667 3.600000 2.166667 2.500000 4.500000 3.500000

[17] 3.833333 2.333333 2.666667 1.833333 2.333333 4.166667 3.166667 3.000000

[25] 3.500000 2.166667 3.333333 3.666667 2.166667 3.166667 3.500000 4.000000

[33] 2.333333 3.333333 1.800000 2.833333 3.166667 3.500000 3.166667 2.333333

[41] 2.333333 2.166667 3.666667 4.333333 3.166667 3.666667 3.333333 3.666667

[49] 3.500000 2.666667 3.666667 2.166667 2.333333 3.333333 3.000000 2.333333

[57] 4.166667 3.500000 2.666667 2.333333 3.000000 4.166667 3.500000 2.500000

[65] 4.333333 3.166667 2.166667 0.600000 2.666667 2.333333 2.400000 1.500000

[73] 2.833333 2.666667 2.000000 3.500000 2.833333 2.333333 4.000000 4.166667

[81] 3.500000 1.800000 2.833333 2.500000 2.800000 2.500000 4.000000 2.333333

[89] 2.666667 3.333333 2.000000 2.666667 2.833333 2.333333 2.166667 3.166667

[97] 2.400000 4.000000 3.666667 2.500000 3.000000 3.833333 4.000000 3.500000

[105] 2.833333 2.833333 3.666667 2.500000 4.500000 2.666667 4.166667 3.500000

```

## [113] 3.500000 4.166667 4.500000 4.000000 2.500000 4.000000 3.400000 3.666
667

## [121] 4.000000 3.500000 3.000000

pka$asum <- apply(pka[,11:16], 1, sum, na.rm = TRUE)

pka$asum

## [1] 12 21 13 15 22 14 15 25 25 15 13 18 13 15 27 21 23 14 16 11 14 25 19 18 2
1

## [26] 13 20 22 13 19 21 24 14 20 9 17 19 21 19 14 14 13 22 26 19 22 20 22 21 1
6

## [51] 22 13 14 20 18 14 25 21 16 14 18 25 21 15 26 19 13 3 16 14 12 9 17 16 10

## [76] 21 17 14 24 25 21 9 17 15 14 15 24 14 16 20 12 16 17 14 13 19 12 24 22 1
5

## [101] 15 23 24 21 17 17 22 15 27 16 25 21 21 25 27 24 15 24 17 22 24 21 18

asummod <- lm(asum ~ age + sex + education + years, data = pka)

summary(asummod)

##

## Call:
## lm(formula = asum ~ age + sex + education + years, data = pka)

##

## Residuals:
##      Min       1Q   Median       3Q      Max
## -14.6199 -3.5053 -0.5053  3.3044  9.3801

##

## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)    16.2990     1.0911  14.938 <2e-16 ***

```

```

## ageover40      -1.1956   1.0273 -1.164  0.247
## sexFemale      1.0704   0.8561  1.250  0.214
## educationPostgrad 0.1146   0.8528  0.134  0.893
## yearsover10    2.4019   1.1910  2.017  0.046 *
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

##
## Residual standard error: 4.679 on 118 degrees of freedom
## Multiple R-squared:  0.04675,   Adjusted R-squared:  0.01444
## F-statistic: 1.447 on 4 and 118 DF,  p-value: 0.2229

anova(asummod)

## Analysis of Variance Table

##
## Response: asum

##      Df Sum Sq Mean Sq F value Pr(>F)
## age      1   0.44   0.436  0.0199 0.88795
## sex      1  37.06  37.060  1.6930 0.19574
## education 1   0.15   0.151  0.0069 0.93398
## years    1  89.03  89.029  4.0672 0.04599 *
## Residuals 118 2582.95  21.889

## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

ameanmod <- lm(amean ~ age + sex + education + years, data = pka)

summary(ameanmod)

##

```

```

## Call:
## lm(formula = amean ~ age + sex + education + years, data = pka)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -2.39289 -0.59097  0.00711  0.51831  1.50711
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)    2.78919   0.17534  15.907 <2e-16 ***
## ageover40     -0.17945   0.16509  -1.087  0.2792
## sexFemale      0.14427   0.13757   1.049  0.2965
## educationPostgrad 0.01107   0.13705   0.081  0.9358
## yearover10     0.37209   0.19139   1.944  0.0543 .
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.7519 on 118 degrees of freedom
## Multiple R-squared:  0.04069,    Adjusted R-squared:  0.008167
## F-statistic: 1.251 on 4 and 118 DF,  p-value: 0.2932
anova(ameanmod)
## Analysis of Variance Table
##
## Response: amean
##              Df Sum Sq Mean Sq F value Pr(>F)

```

```

## age      1 0.004 0.00444 0.0079 0.92950
## sex      1 0.679 0.67857 1.2004 0.27547
## education 1 0.009 0.00941 0.0167 0.89754
## years    1 2.137 2.13661 3.7797 0.05426 .
## Residuals 118 66.704 0.56529

## ---

## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

shapiro.test(pka$amean)

##

## Shapiro-Wilk normality test

##

## data:  pka$amean

## W = 0.96722, p-value = 0.004349

shapiro.test(pka$asum)

##

## Shapiro-Wilk normality test

##

## data:  pka$asum

## W = 0.96905, p-value = 0.006295

```

The Shapiro-wilk normality test is not necessary since sample is above 30, but it's here just in case you want it.

End