

**Workplace wellness: Yoga as a positive psychology intervention for employees in a
South African higher education institution**

by

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Dedication

I dedicate this work to all courageous individuals who have embarked on a personal transformation journey. It is through living examples that we can inspire others. As we heal ourselves, we heal the world, one soul at a time.

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I further declare that I have not previously submitted this work, or part of it, for examination at Unisa for another qualification or at any other higher education institution.


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Abstract

Workplace well-being offers important organisational benefits in the modern-day climate of increasing stress and its detrimental impact on mental and physical health. Employees in the Higher Educational context are experiencing increasing workplace pressures stemming from the continuously changing teaching landscape and the growing importance placed on the role of higher education in societal upliftment. Existing literature highlights a predominant reactive approach to employee wellness in the South African context. Proactive approaches that enhance well-being from a strengths-based perspective are advocated as more favourable alternatives. These are inherently more inclusive and counter the stigma commonly associated with reactive strategies.

This study set out to explore and describe the effectiveness and feasibility of using a yoga-based Positive Psychology Intervention (PPI) to promote employee well-being at a local Higher Education Institution (HEI) as a holistic approach to workplace wellness. Informed by the positive psychology paradigm, a repeated measures quasi-experimental, equal status, concurrent mixed method design was employed, using a purposive sample as the most suitable approach to address the study's aim. Research objectives entailed designing and implementing a 36-week yoga-based PPI and exploring its effectiveness and feasibility as a long-term employee wellness strategy in the target context.

Quantitative results indicated that the yoga-based PPI has promise to promote emotional well-being, as well as energy levels and mental resilience while working, and minimise the experiences of negative emotions and perceived stress. Qualitative findings demonstrated that this type of wellness initiative is a suitable and welcomed strategy to promote holistic employee wellness in response to workplace stress. It offers a range of functional tools that

aid physical, mental, emotional, and social aspects of well-being, and the programme structure guides and supports personal growth and transformation. However, attendance and adherence statistics highlighted the need to emphasise efforts for programme uptake and commitment.

Overall, the outcomes support that this PPI can be recommended as a holistic strengths-based strategy to promote well-being amongst employees working at the selected HEI. However, it is important to indicate that programme feasibility rests on strong organisational support and employee commitment. Additional research is needed to offer further support for policy recommendations.

Keywords: Employee well-being; Workplace wellness; Positive psychology; Yoga; Positive psychology intervention (PPI); Yoga-based workplace PPI; holistic wellness promotion; strengths-based wellness programme; long-term employee well-being promotion; Higher Education Institutions; South African higher educational context

Acronyms

EAP	Employee Assistance Programmes
HEI	Higher Education Institution
HERO	Healthy and Resilient Organisations
HPCSA	Health Professions Council of South Africa
HRV	Heart rate variability
MAT	Meditation awareness training
MHC	Mental Health Continuum
PANAS	Positive and Negative Affect Schedule
PPI	Positive Psychology Intervention
PSS	Perceived Stress Scale
UK	United Kingdom
UWES	Utrecht Work Engagement Scale
WEIRD	Western Educated, Industrialised, Rich Democratic
WHO	World Health Organisation

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1 Chapter One: Introduction

This study explored and described a yoga-based employee wellness programme implemented at a South African Higher Education Institution (HEI) by drawing from various data gathered and documented throughout the research process. These are presented as a coherent whole to reveal the effectiveness and feasibility of using yoga as a Positive Psychology Intervention (PPI) within a workplace setting to promote employee well-being.

This introductory chapter outlines the structure of the research report and offers an orientation for the reader. It is done by providing the background and justification for the research, the problem statement, research questions, aim, objectives, the guiding paradigms informing this inquiry, and the scientific approach taken to explore this topic. The section concludes with an overview of the chapters' layout and a brief summary of the contents.

1.1 Background and Justification for the Research

The inspiration for this venture was born from my personal journey of inner exploration and transformation and a subsequent desire to share the gifts yoga offers me with others who wish to embark on their own journey. My positioning in multiple roles, including researcher, programme co-ordinator, wellness facilitator, and author of this thesis, forced me to remain transparent and cognisant of my subjective influence and inevitable biases (Blythe et al., 2013; Krauss, 2005) throughout the entire project, from conception to drawing the concluding remarks. I therefore deem it necessary to declare my roles and positioning at the very outset. My intimate positioning in this project affords both strengths and limitations (Blythe et al., 2013; West et al., 2013). Providing reflexive accounts is my best attempt to mediate these tensions and illuminate my blind-spots as I strive to empower my audience to draw their own conclusions.

This section starts with a brief description of my journey, which led to the conception of the study. Providing the backstory informs a reflexive account and serves as a measure to strengthen the trustworthiness of the research (Blythe et al., 2013). This is followed by situating the identified problem within the existing body of literature to present a justified argument warranting the need for and importance of this work.

1.1.1 The Researcher's Journey

In 2013, I turned to yoga in a desperate attempt to manage chronic and severe depression and anxiety. I remember this starting in childhood and getting progressively worse during my teenage years. Reflecting on my life, I recall going through annual bouts of depressive episodes, and anxiety was an integral part of my life, physiologically and psychologically, right into early adulthood. My general outlook on life was bleak, seeing the glass as half empty. Shortly after my fourth (and last) admission to a psychiatric hospital in 2012, I fell apart again despite all the medication I was on. I finally realised that I was not equipped to manage the demands of my life effectively and that I needed more practical tools and ongoing support to help me function better. I had read about the benefits of yoga and what it can do for the body, mind, and soul, so I gave it a try. I also decided to leave all my prescribed medications as they came with unpleasant side effects and cost me a small fortune every month.

In July 2013, I enrolled at a local yoga studio and personally committed to attending three to four classes per week. After approximately a year of dedicated practice and various other lifestyle changes, I recognised an inner shift. I somehow felt lighter and slightly more optimistic. I knew yoga was the right tool for me, and it goes without saying that I continued a disciplined practice.

My journey took an unexpected turn when I was approached by one of my yoga teachers, who asked me if I was interested in teaching at his studio. At first, I thought, “Me?

Certainly not! I can't do that!" But a counter-thought soon followed, "Actually, maybe I should first give it a try and see how it goes. I should have more faith in myself. I always put myself down without even trying". I was struck by my change in attitude and enhanced self-confidence. I went on to complete a yoga teacher training course and started teaching weekly classes at a local studio. I thoroughly enjoyed the teaching aspect, and I felt it brought a sense of newfound meaning to my life, something that was utterly foreign to me during my prior grim existence. When I came across the work of Nakamura and Csikszentmihalyi (2003), who provided a positive psychological perspective on motivational sources of creativity, it made perfect sense. My pressing existential problem was my lifelong journey with depression and anxiety, which led me to the yogic path that served as a functional solution I was now inspired to share with others.

My passion for yoga continued to grow. I was reading widely on the subject and discovered it is so much more than I had previously thought, merely physical exercises and breathing techniques. The information resonated with my soul, and I found that the yoga philosophy covered all aspects of being. It provided an approach to life and a way of being in the world, with healing and holistic well-being at its core. Due to my background in psychology, I instinctively drew links between the two fields and the impact yoga made on my psychological conditions, sense of well-being, and the new ways I interacted with myself and the external world.

The inspiration for this project was crystallised one Sunday morning after teaching a class. Someone said something like the following, "Thank you so much for the class; I feel so relaxed now. I really wish I could practise more. I try my best to also come during the week, but work just gets so hectic, and I don't get the time". This was not the first time I had heard this, with people struggling to make time for regular practise due to their work and life responsibilities. It suddenly dawned on me, why not take yoga into the workplace? And so

the inspiration for this project was sparked. The following section offers an exploration of existing literature related to the topic to provide the background and justification for the study.

1.1.2 Well-being and its Promotion in the Workplace

Humans intrinsically desire happiness and well-being (Grant & McGhee, 2020; Lyubomirsky et al., 2005; Sheldon et al., 2013). The World Health Organisation (WHO) (WHO, 2005) defined mental health as a state of well-being in which a person realises their abilities, copes with life stresses, works productively, and makes meaningful contributions to society. Within the positive mental health movement, mental health is defined as the presence of well-being and not merely the absence of illness (Page & Vella-Brodrick, 2009; Vyas-Doorgapersad & Surujlal, 2015). It is advocated that well-being should be actively promoted as it does not spontaneously come about in the absence of mental illness (Keyes, 2002).

Well-being is commonly defined within two domains, hedonic and eudaimonic (Grant & McGhee, 2020; Ryan & Deci, 2001). The hedonic view is typically concerned with emotions and pleasure derived from valued outcomes or goal attainment and uses assessment of subjective well-being (Khaw & Kern, 2014; Ryan & Deci, 2001). The eudaimonic perspective concerns self-realisation and meaningful life experience (Grant & McGhee, 2020; Ryan & Deci, 2001). Keyes (2002) proposed that mental health comprises a unique set of symptoms (separate from mental ill-health symptoms) related to affective states, and psychological and social functioning. This defines mental health as a multidimensional state of well-being related to positive feelings and positive functioning. Keyes' model unites hedonic and eudaimonic aspects in which hedonic relates to feelings and eudaimonic to functioning (Grant & McGhee, 2020).

The presence of mental health and absence of ill-health can be described as a state of flourishing and has important implications in workplace settings (Grant & McGhee, 2020;

Spreitzer & Hwang, 2019). Flourishing individuals report better emotional health, fewer work cut-backs, and less absenteeism (Keyes, 2002). In the workplace, flourishing mental health is related to organisational outcomes such as greater job satisfaction and work engagement (Moller & Rothmann, 2019). Stelzner and Schutte (2016) proposed employee flourishing as a long-term strategy for organisational performance. They argued that the experience of flourishing motivates employees to sustain the enterprise that provides it. In line with this, Kumar et al. (2020) identified employee wellness and engagement as fundamental concepts for organisations that seek optimal performance and wish to remain competitive and sustainable in the highly demanding environments of modern times. They found a significant relationship between employee wellness and work engagement. Other scholars have echoed the importance of healthy and resilient organisations that proactively improve employee and organisational outcomes (Salanova et al., 2013; Spreitzer & Hwang, 2019). Positive emotions, thriving, resilience, and work engagement are all aspects of employee well-being. Furthermore, evidence supports the positive predictive value of happiness and work engagement on organisational commitment in the South African context (Field & Buitendach, 2011; Moller & Rothmann, 2019).

Various occupational and life stressors threaten employees' mental health, which has a knock-on effect on work performance and productivity (Ndoro & Martins, 2019; Petzer & Schoeman, 2005). The prevalence of stress and common mental illness in the workforce, such as anxiety and depression, is increasing at an alarming rate (Bateman, 2015; Poalses & Bezuidenhout, 2018; Stander et al., 2016; Vazi et al., 2013). On 28 May 2019, the WHO declared the inclusion of burnout in the 11th Revision of the International Classification of Diseases (ICD-11) where it is conceptualised as an occupational phenomenon resulting from chronic workplace stress that has not been managed successfully (WHO, 2019). This has enormous financial and social costs for individuals, organisations, and the greater economy

(Bateman, 2015; Stander et al., 2016). It has been estimated that up to 12 billion Rands are lost annually in South Africa due to stress-related absenteeism and low work productivity, negatively affecting organisations' profitability and growth (Magalhaes Das Neves et al., 2014). Moreover, Keyes (2002) postulated that the economic and social burdens associated with the absence of mental health (languishing) might actually be similar to that associated with diagnosable mental illness. This underscores the importance of promoting flourishing mental health in the workplace.

The value of employee well-being for organisational success and profitability has led to an increase in workplace wellness initiatives both locally and globally (Arend, 2008; Danna & Griffin, 1999). Common workplace wellness initiatives applied in the South African context include activities such as health management and screening, HIV/AIDS management (Patel et al., 2013; Petzer & Schoeman, 2005), physical fitness programmes (Edries et al., 2013; Grace et al., 2009), psychological counselling services, and stress management strategies (Naicker & Fouché, 2003; Sieberhagen et al., 2011). However, the majority of these approaches have been criticised for being reactive and catering for troubled employees, leading to stigmatisation and excluding those who are not sick or distressed (Dobson et al., 2019; Ndhlovu, 2010; Salanova et al., 2013; Van den Bergh, 2000). The popularity of these approaches suggests the dominance of a reactive, problem-focused model applied to employee wellness in the local context. This reveals a need to shift the focus of workplace wellness initiatives to efforts that build strengths and promote flourishing among employees in the South African context (Stelzner & Schutte, 2016; Van den Bergh, 2000).

A positive psychology approach to mental health focuses on promoting psychological strengths associated with well-being (such as happiness or flourishing) rather than treating symptoms of mental ill-health (Seligman & Csikszentmihalyi, 2000). Positive Psychology Interventions specifically focus on the promotion of well-being, usually among non-clinical

populations (Lomas et al., 2015) and have been applied in workplace settings in the West (Page & Vella-Brodrick, 2013) and South Africa (Cilliers, 2011; Edries et al., 2013; Van Straaten et al., 2016) with positive outcomes such as improved psychological and subjective well-being, self-acceptance and awareness, goal pursuit and attainment, enhanced employee relations, and reduced absenteeism. However, South African-based research on workplace PPIs is limited and reveals little evidence of programmes combining mental and physical components to promote well-being in a single programme. For example, Cilliers (2011) explored participants' experiences of participating in a short-term positive psychology leadership programme, while Van Straaten et al. (2016) used an appreciative inquiry workshop to identify strengths that could enhance employee well-being. Neither of these approaches utilised any physical activity to improve aspects of well-being. In contrast, the short-term employee wellness programme based on principles of cognitive behavioural therapy evaluated by Edries et al. (2013) focused primarily on physical aspects of well-being, including aerobic exercises and a health promotion talk. Both a sound mind and body are important for holistic well-being (Taute, 2008), which further highlights the value of utilising both mental and physical components in PPIs. This could be achieved with various tools from Hatha yoga.

Yoga is an ancient psychological, physiological, and spiritual discipline (Belling, 2001) designed to bring balance and health to an individual's mental, physical, emotional, and spiritual dimensions (Ross & Thomas, 2010). It is widely accepted as a holistic approach to health; a regular practice enhances physical strength and flexibility, promotes characteristics of compassion, friendliness, and self-confidence, and cultivates a greater sense of calmness and general well-being (Woodyard, 2011). Empirical evidence has shown that yoga can improve aspects associated with emotional well-being (Hartfiel et al., 2011), psychological health (Hartfiel et al., 2012; Maddux et al., 2017), and social well-being (Kishida et al., 2018)

among different populations. Modern-day interest in yoga is rapidly growing as people are increasingly exploring yoga for its various health benefits (Kishida et al., 2018; Park et al., 2016). Similar to PPIs, wellness promotion is a primary aim of yoga (Belling, 2001). Therefore, it is argued that yoga can be used as a tool for PPI to holistically promote well-being by combining mental and physical practices within a single programme.

Higher education is a key driver for human and economic development and is critical in creating a sustainable future (Cortese, 2003; Poalses & Bezuidenhout, 2018). Moreover, South African HEIs play a significant role in the country's ongoing transformation agenda (Field & Buitendach, 2011; Van Straaten et al., 2016) through the advancement of human and economic development through education. Much emphasis is placed on the quality of universities' teaching, research, and social engagement roles, which is a high priority in the South African context (DHET, 2015). However, the South African higher education system is experiencing severe challenges with regard to size, composition, and academic staff capacity which threatens the general functioning and performance of these institutions (DHET, 2015; Poalses & Bezuidenhout, 2018). Various instances of student and labour unrest cause significant disruptions in administrative functions and the academic projects of numerous HEIs (Luescher, 2017; Ndoro & Martins, 2019). These disruptions are a source of great stress and anxiety for both administrative and academic staff, threatening their well-being. These disruptions and stress were further intensified following the recent COVID-19 phenomenon and its consequences, including efforts to adjust and readjust to new modes of working, along with a multitude of other physical and psychological traumas experienced on both individual and collective levels (Gewin, 2021; Hedding et al., 2020). With the important societal role of higher education and the various challenges faced by staff at HEIs that might negatively affect their well-being—both pre- and post the COVID 19 phenomenon—promoting employee flourishing in this context was identified as an important focus area.

HEIs no longer offer the low-stress environments they once did (Poalses & Bezuidenhout, 2018; Rothmann & Essenko, 2007). Hartfiel et al. (2011) pointed to evidence suggesting that university staff's psychological well-being might be low compared to other professions. Gewin (2021) also highlighted that pandemic burnout is rampant among academic staff as various factors, such as research delays and changes in working modes, caused additional stress and anxiety in this population.

There is international evidence supporting the use of lunchtime yoga programmes to enhance emotional well-being and resilience to work stress and reduce state anxiety among university employees (Cheema et al., 2013; Hartfiel et al., 2011). Although South African literature focusing on the HEI context has revealed concerns about the effects of job stress and burnout on employees' well-being and a need for interventions to address these issues (Barkhuizen et al., 2013; Poalses & Bezuidenhout, 2018; Rothmann & Essenko, 2007), very little research related to wellness promotion interventions in this context could be found. A study by Van Straaten et al. (2016), where an appreciative inquiry workshop was used to explore the strengths of an HEI that might serve as driving forces for enhancing its staff's well-being, was motivated by a lack of research in this area.

1.2 Problem Statement

Well-being plays an important role in workplace settings. Evidence supports the benefit of employee well-being for organisations in terms of more productive and committed workers (Moller & Rothmann, 2019; Van der Vaart et al., 2015) who are more resilient to work pressure (Keyes, 2002). Resilient individuals generally respond to and manage stress more effectively and are less prone to the negative impact of stress on health and well-being (Boshoff et al., 2014; Lamers et al., 2015; Trompetter et al., 2017). However, ever-increasing demands, pressing deadlines, and expectations to do more with less add tremendous pressure and stress on employees (Carr et al., 2011; Gewin, 2021; Spreitzer & Hwang, 2019; Vyas-

Doorgapersad & Surujlal, 2015; WHO, 2019). In turn, this could lead to the development or exacerbation of mental and/or physical health issues, negatively impacting employees' sense of well-being and quality of life (Poalses & Bezuidenhout, 2018).

Evidence suggests that few workplaces offer programmes to promote flourishing (Page & Vella-Brodrick, 2013; Vyas-Doorgapersad & Surujlal, 2015). To the researcher's knowledge, there is a paucity of evidence on the effectiveness of PPI in South African workplace settings. The available literature on workplace wellness research in South Africa over the past 20 years revealed a dominant reactive model that is problem-solution-focused (Naicker & Fouché, 2003; Pillay & Terblanche, 2012; Sithole, 2001). Few studies investigated strengths-based approaches to employee wellness in the local context (Lubbe et al., 2008; Van Straaten et al., 2016) that specifically targeted the promotion of well-being, such as PPI studies.

The available research on proactive approaches to employee wellness in the South African context predominantly focused on disease prevention and physical health promotion (Grace et al., 2009; Lubbe et al., 2008). Very few empirical studies investigated the impact of strategies focused on building strengths from a positive psychology perspective aimed at promoting well-being (Cilliers, 2011; Van Straaten et al., 2016), and even fewer considered strategies that targeted well-being more holistically by focusing on mental and physical aspects of well-being in a single programme (Edries et al., 2013). A review of South African studies in the field of positive psychology from the SABINET database since 1970 revealed only 14 studies that focused on employee well-being/wellness (Coetzee & Viviers, 2007).

Literature on workplace wellness in the South African context indicates a gap in empirical evidence of the value of programmes or interventions utilising mental and physical practices in a single programme aimed at enhancing employee well-being from a strengths-based perspective (Coetzee & Viviers, 2007; Lubbe et al., 2008; Naicker & Fouché, 2003;

Pillay & Terblanche, 2012; Sithole, 2001; Van Straaten et al., 2016). Moreover, studies conducted in South Africa (Poalses & Bezuidenhout, 2018; Sithole, 2001; Van Straaten et al., 2016) indicate a need for empirical exploration of strengths-based wellness promotion, specifically in HEIs. This gap makes South African HEIs a prime context within which to study issues of positive states and well-being at work (Field & Buitendach, 2011). Yoga is proposed as a tool to inform a PPI in a HEI to promote employee flourishing in the South African context. This study consequently sought to address the gap in local literature exploring the efficacy and feasibility of workplace PPI in HEIs.

1.3 Research Questions, Aim, and Objectives

This study set out to explore the overarching research question: How effective and feasible is yoga as a PPI to promote well-being among employees working at a selected South African HEI? This exploration was driven by two sub-questions that were to be answered through a mixed methods approach. The research aim, objectives, and hypotheses follow.

1.3.1 Research Questions

1. What are the effects of a yoga-based PPI on mental health, emotions (positive and negative affect), work engagement, and perceived stress among participating employees?
2. What are employees' perceptions and experiences of using a yoga-based PPI to promote their sense of well-being?

1.3.2 Research Aim

The study aimed to explore and describe the effectiveness and feasibility of using yoga as a tool for a PPI to promote well-being among employees working at a selected South African HEI.

1.3.3 Objectives

The following objectives were set:

- To develop and implement a yoga-based PPI for employees at a South African HEI.
- To explore the programme's effects on mental health, emotions, work engagement and perceived stress among employees participating in the intervention.
- To explore participants' perceptions and experiences of using yoga as a PPI tool to enhance their sense of well-being.

1.3.4 Hypotheses

The following hypotheses were formulated to test the effects of programme participation on selected variables (mental health, work engagement, emotions, and perceived stress):

Mental Health, H₁: Participation in the programme will improve mental health.

Work engagement, H₂: Participation in the programme will enhance work engagement.

Emotions, H_{3a}: Participation in the programme will increase positive affect.

Emotions, H_{3b}: Participation in the programme will decrease negative affect.

Perceived stress, H₄: Participation in the programme will decrease levels of perceived stress.

The null hypotheses were that participation in the programme would not increase mental health, work engagement or positive emotions and would not decrease negative emotions or perceived stress. The theoretical and methodological paradigms in which the research was situated are described next.

1.4 Guiding Paradigms

Paradigms have been described and defined in varied and sometimes contradicting ways with the use of different terms (Mackenzie & Knipe, 2006). Paradigms are discussed as philosophical, theoretical, and methodological (Faller, 2001; Krauss, 2005; Morgan, 2014; Scotland, 2012). A paradigm is a belief system or worldview that guides an investigation (Krauss, 2005) by focusing the researcher's attention more narrowly (Wray, 2011). Ontology, epistemology, methodology, and methods are key components of paradigms that inform aspects such as the nature of reality and how it can be known (Scotland, 2012). It should be acknowledged that the adoption of a particular paradigm can potentially constrain intellectual curiosity and creativity and blind the researcher to certain aspects of social phenomena or new theories (Feilzer, 2010), and continuous reflexivity should therefore be applied. Positive psychology and pragmatism have been regarded as unique lenses through which to view social phenomena and approach research inquiry (Faller, 2001; Feilzer, 2010; Morgan, 2014; Nakamura & Csikszentmihalyi, 2003). These lenses served as the two guiding paradigms informing the theoretical and methodological aspects of this project and are discussed next.

1.4.1 Positive Psychology

The recent rise of the positive psychology movement has been regarded as a paradigm shift within the field of psychology (Faller, 2001; Lomas, 2016; Seligman & Csikszentmihalyi, 2000; Strümpfer, 2005). The positive psychology paradigm shifted the focus away from negative human traits, pathology, and victimology, rooted in the perspective of the deficit—or what Strümpfer (2005) referred to as a pathogenic paradigm—towards the study of positive attributes, meaningful living, human potential, and flourishing, situated in the strengths perspective. Nakamura and Csikszentmihalyi (2003) demonstrated how looking at creativity and motivation from a strengths or deficit lens leads to very different

explanations. This affirms that the theoretical lens we use in viewing our world matters. It influences what we look at, and how we see, interpret, and understand phenomena.

The original three-fold mission of psychology was to cure mental illness, to make life more fulfilling, and to nurture talent. But the focus shifted predominantly to treating pathology shortly after the Second World War when psychologists discovered the economic benefits of treating and studying pathology (Seligman & Csikszentmihalyi, 2000). Consequently, the field's subject matter, research, theories, and treatment approaches developed mainly through the deficit bias that dominated conventional psychology and led to a somewhat distorted view of what is normal and exceptional (Faller, 2001). During the turn of the millennium, advocates such as Seligman and Csikszentmihalyi (2000) called for a return to focus on human strengths and flourishing.

The new movement has not been without critique, for example, its focus on Western Educated, Industrialised, Rich Democratic (WEIRD) populations (Hendriks et al., 2018) and the accentuation placed on the positive (Held, 2004; Lomas, 2016). It has been argued that the 'tyranny of the positive' initially fuelled by the positive psychology movement failed to sufficiently appreciate the contextual complexity of emotional outcomes and painted negative emotional states as undesirable and pathological (Lomas, 2016). In line with this, Held (2004) argued that the emphasis on maintaining a positive attitude created a cultural expectation to be upbeat and optimistic all the time which could induce a sense of defeat and failure when a person is unable to change their outlook, habits, emotions, and feelings about life to be more positive. She identified this as a possible unintentional consequence of placing positivity on a pedestal and also provided evidence for the contradictory findings on the link between positivity and good health and negativity and poor health.

Held (2004) distinguished between the dominant message of positive psychology that overemphasises optimism and the non-dominant second-wave message that recognises value

in both positive and negative outlooks, which gained traction as time passed (Lomas et al., 2015). Interestingly, Held's (2004) paper concluded with an acknowledgement of her bias towards 'negative psychology'. This further demonstrates how personal preferences and inclinations colour our perceptions and opinions. Furthermore, Hendriks et al. (2018) reported a steady increase in positive psychology literature from non-Western countries since 2012, which signifies an evolving trend towards the globalisation of positive psychology research.

The deficit paradigm also informed much research on and approaches to employee wellness. Recently, there has been a push towards a greater focus on strength-based approaches to workplace wellness (Marx, 2017; Ndhlovu, 2010; Page & Vella-Brodrick, 2009; Stelzner & Schutte, 2016; Van den Bergh, 2000). In line with the mission of the recent positive psychology movement, Van den Bergh (2000) claimed that the increased modern-day emphasis on holistic health, wellness, and spirituality calls for rethinking approaches to Employee Assistance Programmes (EAPs) to move away from pathology to focus more on building and nurturing strengths.

Promoting psychological strengths and positive behaviour in the workplace is regarded as a proactive approach to employee wellness as it builds strengths such as resilience and flourishing from a positive perspective (Marx, 2017). Interventions aimed at increasing individuals' well-being have been considered the bottom line of work in positive psychology (Seligman et al., 2005) and are referred to as PPIs. Positive psychology was therefore chosen as the preferred theoretical lens informing this study. The methodological paradigm of choice is discussed next.

1.4.2 Pragmatism

Pragmatism is commonly accepted as the paradigm associated with mixed methods research (Feilzer, 2010; Johnson & Onwuegbuzie, 2004; Miller, 2006; Morgan, 2014),

perhaps because it is not strictly committed to a particular system of philosophy or reality (Mackenzie & Knipe, 2006). Mackenzie and Knipe (2006) argued that although some paradigms appear to lead a researcher to favour quantitative or qualitative approaches, no paradigm prescribes or prohibits the use of either of these methodological approaches. The pragmatic paradigm endorses eclecticism and pluralism, which afford the researcher the freedom to apply different worldviews and assumptions, and mix methods of data collection and analysis in one study that best meet their needs and purposes (Johnson & Onwuegbuzie, 2004; Meixner & Hathcoat, 2018). In line with this, Feilzer (2010) explained that pragmatism philosophically accepts the existence of singular and multiple realities that are open to empirical inquiry and it is oriented towards solving problems in the real world more practically. Morgan (2014) echoed that the appeal of pragmatism in mixed methods research was more for its practicality than for its broader philosophical basis.

As the pragmatic approach to solving problems in the social world arguably offers a more flexible guide to research design (Feilzer, 2010; Meixner & Hathcoat, 2018), it was well suited to underpin this exploratory study. Appropriate methods were matched to address the specific research questions by using tools from the positivist and interpretivist paradigms, such as hypothesis testing and semi-structured interviews (Mackenzie & Knipe, 2006). The interpretivist epistemology, informing the qualitative descriptive aspect of this study, assumes the ontological position that every individual perceives a different (subjective) reality constructed and informed by individual experiences while accepting that the researcher's individual perceptions will lead to unavoidable bias (Krauss, 2005; Mackenzie & Knipe, 2006) which should be acknowledged and mitigated through ongoing reflexivity (Blythe et al., 2013; Meixner & Hathcoat, 2018). A broad overview of the applied research methodology is presented next.

1.5 Overview of Methodology

A repeated measures quasi-experimental, equal status, concurrent mixed method design was employed, which can be represented as follows: [QUAN + qual] + QUAL (Barns, 2019; Johnson et al., 2007; Meixner & Hathcoat, 2018). The study was conducted in a 'real world' setting where all employees at HEIs comprised the study population. A suitable study site was purposefully selected based on need, access, buy-in, and institutional willingness to promote and support the intervention. All employees from the accessible study population at the selected HEI, who met the selected inclusion criteria, were invited to voluntarily participate in the research, which required them to participate in a 36-week yoga wellness programme and related research activities.

An electronic questionnaire was completed at four different time points to explore the effects of the intervention on participants' mental health, emotions, work engagement, and perceived stress. The questionnaire included a battery of freely accessible, validated, self-report measures to test the intervention's effects on selected outcome variables and some questions that allowed for participants' open-ended responses to gather supplementary data with which to explain the test results in more depth and account for influences of any confounding variables generally expected in 'real world' research settings (Gravetter & Forzano, 2009; Zohrabi, 2013). This strand is thus represented as [QUAN + qual] as priority was given to the quantitative items (Meixner & Hathcoat, 2018). The validated measures used included The Mental Health Continuum Short Form (MHC-SF), The International Positive and Negative Affect Schedule Short Form (I-PANAS-SF), The Utrecht Work Engagement Scale Shortened Version (UWES-9), and the 10-item Perceived Stress Scale (PSS-10).

A sub-sample of participants also participated in individual semi-structured interviews after completing the programme to explore their perceptions and experiences of using yoga as

a PPI to promote their sense of well-being. This strand yielded qualitative data (hence equal status, concurrent design). The various quantitative and qualitative data sources were analysed independently and triangulated in ways that combined the strengths and minimised the weaknesses of the two approaches to produce meaningful and socially useful knowledge (Feilzer, 2010; Johnson & Onwuegbuzie, 2004; Meixner & Hathcoat, 2018).

Mixed methodology's pragmatic approach to solving problems in the social world offered a viable and flexible approach for the research design (Feilzer, 2010) that was most promising to produce meaningful findings of value and application to 'real world' settings. All research activities were implemented according to relevant ethical guidelines.

1.6 Ethical Considerations

The study was carried out in line with general ethical guidelines for health researchers as prescribed by the Health Professions Council of South Africa (HPCSA), including the three ethical principles *best interest or well-being*, *respect for persons*, and the principle of *justice* (HPCSA, 2008). Research activities only commenced once ethical clearance and permission from the various stakeholders and gatekeepers had been received in written form.

Participation in the study was completely voluntary and based on full informed consent. Participants were made aware that their identity could not remain anonymous due to the particular nature of the study but were assured that their information would be kept confidential and under no circumstances would be shared with the institutional gatekeepers. All results were reported in a collective group format, and no individual results could be traced directly to specific individuals.

The research was conducted in a scientifically sound manner to produce reliable and valid outcomes. In line with responsible research practice, both quantitative and qualitative checks for scientific soundness were included, such as reliability, validity, and trustworthiness of the findings. After concluding the project, the thesis is generally available.

1.7 Chapter Layout

A general overview of the chapters and related contents follows.

Chapter 1: Introduction, serves as the general orientation. A description of the research background, the identified problem, rationale, research questions, and the approach taken to conduct the inquiry sets the stage.

Chapter 2: Conceptual framework, offers a detailed description of the concepts comprising the guiding framework drawn from the theoretical underpinnings, including Keyes' (2002) mental health continuum, Fredrickson's (2001) broaden-and-build theory of positive emotions, the model of sustainable happiness by Lyubomirsky et al. (2005), and core elements of yoga philosophy (Desikachar, 1995).

Chapter 3: Literature review, presents a critical discussion of existing research to situate the project further within the current body of knowledge. Topics covered include well-being and its importance in the workplace, specifically regarding emotional well-being, positive functioning, and work engagement. Perceived stress is discussed as a threat to employee wellness, and research on workplace well-being interventions is explored. Research on yoga and its relationship with well-being is discussed before a case for a yoga-based workplace PPI at a South African HEI is presented.

Chapter 4: Research methodology, offers a detailed description of the yoga wellness programme and how it was implemented, the target population and sample, the various data collection procedures, data processing and analysis, issues concerning data validation and trustworthiness, and a detailed discussion on research ethics.

Chapter 5 and 6: The results and discussion chapters, present the outcomes of the quantitative and qualitative data analyses conducted. These chapters present the empirical findings that describe the effectiveness and feasibility of offering a yoga-based PPI in a workplace setting to promote employee well-being.

Chapter 7: Integrated concluding discussion, limitations, and recommendations presents an overview of the main project outcomes drawn from quantitative and qualitative strands. Study limitations are highlighted, and recommendations for further research are offered.

1.8 Chapter Summary

This chapter provided the general orientation for the reader by opening with a declaration of the researcher's unique positioning and multiple roles within the study. This orientation was done in the spirit of offering ongoing reflexive accounts to uphold the trustworthiness of the research and reveal personal biases to guide the reader to their own interpretation of the presented outcomes. Background on the research topic informed the problem statement and resulting research questions, aim, objectives, and hypotheses formulated for testing. This was followed by the philosophical underpinnings of positive psychology and pragmatism, the study's guiding theoretical and methodological paradigms. An overview of the methodology and broad ethical consideration was followed by an outline of the remaining chapters, which concluded this introduction. From here, the discussion moves to a deeper exploration of the concepts drawn from the fields of positive psychology and the yoga system that were combined into the study's conceptual framework.

2 Chapter Two: Conceptual Framework

This chapter describes the framework that guided the conceptualisation of the research, the development and implementation of the wellness intervention, and the interpretation of the findings. Although the terms theoretical and conceptual framework are often used interchangeably (Rocco & Plakhotnik, 2009), a conceptual framework draws on concepts from different theories, while a theoretical framework is used when a single theory underpins a study (Green, 2014). A conceptual framework is considered more flexible than a theoretical framework as it is based on conceptual terms rather than rigid theoretical variables and causal relations (Jabareen, 2009). Consequently, a conceptual framework provides an interpretive approach to understanding a phenomenon better rather than strictly aiding a cause-effect prediction. The function of the conceptual framework is not only to categorise and describe concepts relevant to a particular study but also to indicate relationships among them (Rocco & Plakhotnik, 2009).

Vazquez et al. (2018) emphasised the need to apply integrative theoretical models in workplace wellness. Such models can contribute to an expanded understanding of disease-contributing factors associated with the risk of harm and of healthy aspects that hold the potential to act as protective factors for employees' health. In response to this, concepts from the fields of positive psychology and yoga philosophy were combined into a fitting framework which informed the research in a manner that would appropriately address the overarching aim in line with the theoretical paradigm and offer a viable reference point for interpreting the findings (Green, 2014; Rocco & Plakhotnik, 2009). The concepts and their underlying theoretical perspectives included in the framework are listed below:

- Keyes' Mental Health Continuum (Keyes, 2002) informed the concept of flourishing mental health.

- Fredrickson's Broaden-and-Build Theory of Positive Emotions (Fredrickson, 2001) contributed to the notions of the broadened thought-action repertoires of positive emotions and the undoing hypothesis, a positive adaptation to stress.
- The Architecture of Sustainable Happiness by Lyubomirsky et al. (2005) proposed intentional activities as viable means to achieve sustainable changes in well-being.
- Finally, core elements embedded in yoga philosophy informed the PPI wellness tools aimed to enhance well-being holistically. These included physical postures, breathing practice, relaxation, meditation, and a life of right action (Belling, 2001).

Discussions of the theoretical underpinnings of these concepts are provided in the following sections.

2.1 Positive Psychology Concepts

Positive psychology entails enquiry into the indicators of human functioning, which include the study of mental health (Keyes, 2007; Trompetter et al., 2017), understanding the functions and value of positive emotions (Fredrickson, 2013), and determining strategies for promoting well-being (Kaplan et al., 2014; Lyubomirsky et al., 2005; Sheldon et al., 2013). Within the positive psychology movement, it is commonly accepted that both hedonic and eudaimonic aspects are vital to well-being (Grant & McGhee, 2020; Keyes et al., 2002; Ryan & Deci, 2001; Trompetter et al., 2017). Consequently, combining the two approaches is recommended to ensure a well-rounded examination and well-being assessment (Lambert et al., 2015).

In response to the longstanding call from social scientists to define mental health as more than the mere absence of mental illness, Keyes (2002) operationalised mental health as a set of symptoms of an individual's subjective well-being which pertain to positive feelings

and positive functioning. The mental health continuum comprises personal perceptions and evaluations of one's life in terms of affective states, psychological functioning, and social functioning, which could be applied to measure states of well-being (Keyes et al., 2002). From this perspective, mental health includes intrapersonal and interpersonal dimensions, which consist of emotional well-being (hedonic aspects) and positive functioning (eudaimonic aspects), respectively (Lambert et al., 2015). Keyes (1998) recognised that well-being had traditionally been operationalised as a subjective evaluation of life satisfaction, affect, or psychological functioning—all of which are private features. Recognising the importance of the social sphere on well-being, Keyes expanded the operational definition of subjective well-being to include social dimensions. In Keyes' model, flourishing describes a state of complete mental health which signifies being filled with positive emotions and functioning well, both psychologically and socially (Keyes, 2002).

Happiness is an affective symptom of mental health which has been conceptualised as comprising multiple empirically separable facets, including frequent positive emotions relative to negative ones, positive beliefs about life, global life satisfaction, and domain-specific satisfaction (Cohn et al., 2009). Intending to develop a proper evolutionary argument for the function of positive emotions, Barbara L. Fredrickson (2003, 2013) set out to understand why humans have evolved to experience positive emotions by tracing possible pathways for its life-enhancing effects. Fredrickson recognised that the action tendencies of positive emotions were notably vague and underspecified compared to negative emotions, and set out to formulate a theoretical model to capture the unique effects of positive emotions better (Fredrickson, 2003; Fredrickson & Levenson, 1998). The broaden-and-build theory recognises the evolutionary value of positive emotions and well-being (Lambert et al., 2015). The theory states that despite being phenomenologically distinct, certain discrete positive emotions share the ability to broaden a person's momentary thought-action repertoires and, in

turn, build enduring personal resources (Fredrickson, 2001). Emotions are defined as a subset of affective phenomena, which are distinguished as brief, multi-component response systems initiated by changes in current circumstances that are either consciously or unconsciously appraised to be personally significant and influence individuals' inclination to act (De Longis & Alessandri, 2020; Garland et al., 2010). Emotions or affective states form a key component in hedonic well-being (Grant & McGhee, 2020; Lambert et al., 2015). However, the broaden-and-build theory unites hedonic well-being with eudaimonic well-being, which is facilitated by the accumulation of psychosocial resources (Garland et al., 2010). This points to the likely enduring impact of experiencing positive emotions on functional outcomes, social connectedness, and overall well-being.

To address contradictory evidence concerning the likelihood of effecting lasting gains in happiness, Lyubomirsky et al. (2005) set out to determine what circumstances, activities, and habits are most likely to produce sustainable increases in well-being—defined in hedonic terms as frequent positive affect, infrequent negative affect, and high life satisfaction (Keyes, 2002; Lyubomirsky et al., 2011). These authors indicated that there was a paucity of scientific support showing that people's well-being can change for the better and argued that the considerable scientific pessimism over the possibility of effecting lasting increases in well-being was the main reason for the neglect of this question. Lyubomirsky et al. (2005) drew from more optimistic sources in support of happiness promotion to inform their model on bringing about enduring levels of enhanced well-being. Evidence in support of the model's validity was then presented. The different framework concepts drawn from the field of positive psychology are each discussed next.

2.1.1 The Mental Health Continuum

Keyes (2002, 2005) wanted to explore if adults who remained free of mental illness were mentally healthy and productive. Keyes advocated that a state of complete mental

health, termed flourishing, is the presence of a set of symptoms unique and separate from psychopathology. This implied a two continua model of mental health and mental illness, indicating that mental health and psychopathology are not considered opposite ends of a single continuum (Keyes, 2007). Instead, Keyes' model places positive mental health orthogonal to mental illness (Lambert et al., 2015; Trompetter et al., 2017). This suggests that the promotion of well-being should focus on specific aspects of mental health and does not automatically arise from the prevention or absence of mental illness. Keyes (2002, 2007) provided evidence to support the notion that the absence of mental illness does not automatically infer the presence of mental health and vice versa. For example, in a sample of American adults between the ages of 25 and 74 years, 85.9 per cent did not have a depressive episode, but only 17.2 per cent of those adults who did not have depression were classified as flourishing (Keyes, 2002).

Keyes (2002) described hedonic, or emotional well-being, as a cluster of symptoms that reflect the absence or presence of positive feelings about life. These symptoms can be determined by scales measuring high levels of positive affect, low levels of negative affect, and perceived satisfaction with life, all related yet distinct dimensions. This threefold structure was previously confirmed, indicating its validity (Keyes et al., 2002). For example, Lucas et al. (1996) examined the discriminability between the affective and cognitive well-being constructs. They found very good evidence for the discriminant validities of positive affect compared to negative affect and life satisfaction from both positive and negative affect. Moreover, this well-established structure includes both short term assessments of emotional states (*expressed* emotional well-being) and long term assessments of one's life (*avowed* emotional well-being) which underscores the different temporal frames of subjective well-being (Keyes, 2002; Keyes et al., 2002).

Positive functioning, the eudaimonic aspect of well-being, is determined by indicators that measure psychological and social functioning. Psychological functioning comprises six dimensions of psychological well-being: self-acceptance, personal growth, purpose in life, positive relations with others, environmental mastery, and autonomy (Ryff & Keyes, 1995). Keyes asserted that the indicators of psychological well-being were well-validated and reliable measures to include to determine personal dimensions of mental health (Keyes et al., 2002; Ryff, 2014). Social functioning is measured using five dimensions of social well-being, including social coherence, social actualisation, social integration, social acceptance, and social contribution (Keyes, 2002). The five-factor structure of social well-being proposed by Keyes was validated in two earlier studies (see Keyes, 1998).

Using the mental health continuum to measure experiences of emotional, psychological, and social well-being can help indicate different levels of individuals' mental health. Keyes (2002) proposed that higher scores indicate the presence of mental health, termed flourishing, while lower scores indicate the absence of mental health, a state defined as languishing. Scores neither classified as flourishing nor languishing are termed a state of moderate mental health. Interestingly, a local study that identified mental health profiles for managers in agricultural organisations revealed four profiles: languishing, moderately languishing, moderately flourishing, and flourishing (Moller & Rothmann, 2019). This study demonstrated that the moderate mental health category split into two profiles when a person-centred approach was used, questioning the original three-category classification suggested by Keyes (2002). However, the finding should be interpreted cautiously since the study sample was not representative of the general population (Moller & Rothmann, 2019).

The shortened version of Keyes' mental health continuum has been validated with South African samples, specifically in organisational contexts (Keyes et al., 2008; Van Zyl & Olckers, 2019). Keyes et al. (2008) applied the MHC-SF to a random sample of 1050

Setswana-speaking adults. The findings confirmed the three-factor structure of emotional, psychological, and social well-being and the criterion-related validity of this scale. More recently, Van Zyl and Olckers (2019) verified the three-factor structure amongst 624 respondents from various South African organisations.

Evidence from representative American samples has shown that flourishing individuals are at lowest risk for common mental illnesses, such as depression, and function better than moderately healthy adults, who, in turn, function better than languishing adults (Keyes, 2005). Similar findings emerged from a South African sample (Keyes et al., 2008). Findings by Keyes (2002) also revealed that languishing individuals who experienced a major depressive episode in the preceding year were most severely impaired in functioning. They reported the worst emotional health, most limitations of daily activities, and the most work cutbacks and work days lost. When mental illness was accompanied by flourishing or moderate mental health, individuals showed better functioning (Keyes, 2007). Surprisingly findings by Boshoff et al. (2014) revealed high levels of flourishing in a cohort of Black South African school teachers despite also reporting high stress levels. This finding could suggest the protective function of resilience against threats to well-being, such as occupational stress. Increasing evidence suggests that positive mental health serves as a resilience resource and contributes an adaptive function against threats to mental and physical health (Lamers et al., 2015; Ryff, 2014; Trompetter et al., 2017). Actively promoting symptoms associated with mental health could therefore reduce the risk of developing a mental illness, improve functioning in cases where mental illness is present, or could play a role in protecting individuals from stress.

Keyes et al. (2000) also argued that subjective well-being in employees could lead to increased productivity based on research demonstrating that people with higher levels of positive affect think more creatively and efficiently and are more likely to engage in prosocial

behaviour. Local findings from organisational contexts further suggest that a languishing mental health profile is associated with lower job satisfaction and organisational citizenship behaviour (altruism, conscientiousness, civic virtue, and courtesy) and greater intention to leave compared to a flourishing mental health profile (Moller & Rothmann, 2019). Promoting the mental health of employees could therefore serve positive organisational outcomes.

2.1.2 The Broaden-and-Build Theory of Positive Emotions

Fredrickson's theory posits that positive emotions broaden a person's momentary mindset, which builds various physical, intellectual, psychological, and social resources conducive to long-term success and well-being (Fredrickson 2001, 2003; Fredrickson & Levenson, 1998). This claim was supported by conceptual analyses of a range of positive emotions by drawing mainly from Ekman's (1992) notion of emotion families (see Fredrickson & Levenson, 1998). For example, the positive emotion of joy does not necessarily represent a single affective state but rather a family of related states characterised by a common theme and variations on that theme. Although members of a particular emotion family may vary in intensity, variations may also be accompanied by small alterations in associated thought-action tendencies (Fredrickson & Levenson, 1998).

Fredrickson (1998) described circumstances that tend to elicit certain emotions, the apparent changes in the momentary thought-action repertoire, and the outcomes or consequences of these changes. Joy, interest, contentment, and love included some positive emotions used to demonstrate this. For example, joy broadens by creating a desire to play, be creative, and push limits. These urges are evident in social and physical behaviour and artistic and intellectual behaviours. Joy shares conceptual space with other high-arousal emotions such as elation, amusement, and gladness, which arise in contexts appraised as familiar and safe, requiring low effort, and in some instances, by events construed as accomplishments or

progress towards one's goal. Joy activates action tendencies that are aimless, for example, when young children joyously run around seeking things with which to play.

Interest broadens by creating an urge to explore, gather new information and experiences, and expand the self in the process (Fredrickson, 2001). It shares conceptual space with intrinsic motivation and challenge, as well as the flow or enjoyment experience, or when a person's perceived skills match the perceived challenges of an activity, representing a form of interest. Interest sparks the momentary thought-action tendency to explore and the desire to investigate, which is characterised by a mindset of openness to new ideas, experiences, and action (Fredrickson & Levenson, 1998).

Contentment relates to more low-arousal emotions, such as serenity and tranquillity, and shares conceptual space with mild joy and, to some extent, relief (Fredrickson & Levenson, 1998). It broadens by creating the urge to savour current circumstances and integrate them into new views of oneself and the world (Fredrickson, 2001).

Love comprises emotions such as joy, interest, and contentment and broadens by creating a recurring desire to explore, play with, and savour experiences with loved ones (Fredrickson, 2001). Fredrickson (1998) highlighted that these positive emotions all share the common feature of broadening the individual's momentary thought-action repertoire.

On the other hand, negative emotions served an evolutionary adaptive value by narrowing thoughts and actions to those that promoted survival in life-threatening circumstances (Ekman, 1992; Fredrickson & Levenson, 1998; Tooby & Cosmides, 1990). Negative emotions trigger the fight-or-flight response that narrows the thought-action repertoires as the evolutionary instincts to escape, hide, or attack arise (Fredrickson, 2001). This notion was informed by the earlier proposal by Easterbrook (1959), which received subsequent empirical support demonstrated in a review by Derryberry and Tucker (1994). For example, fear creates the desire to escape, anger, the impulse to attack, and disgust, the urge

to expectorate (Fredrickson, 2001; Fredrickson & Levenson, 1998). These emotional reactions are accompanied by specific physiological changes that enable the required action (Ekman, 1992; Fredrickson, 2003). Hans Selye (1973) was one of the early pioneers to explain the detrimental effects of prolonged stress responses on human physiology, which results from the fight-or-flight response.

Fredrickson (2001) suggested that the capacity to experience positive emotions may be a fundamental human strength that is central to the study of human flourishing, as these emotions serve as markers of optimal well-being (Grant & McGhee, 2020). While people are experiencing positive emotional states, they are not plagued by negative emotions such as anxiety, anger, frustration, irritability or despair and their detrimental physiological and psychological effects on the body and mind (De Longis et al., 2020; Selye, 1973). Instead, the broaden hypothesis proposes that positive emotions expand the scope of attention, cognition, and action, which widens the mind's perception, thoughts, and actions (Fredrickson & Levenson, 1998). This was demonstrated with two experiments using university students ($n = 104$). In the first experiment, a global-local visual processing task was used to assess the scope of attention. The second experiment used a Twenty Statements Test to assess thought-action repertoires. Experiment one showed that positive emotions (amusement and contentment) broadened the scope of attention compared to a neutral state, and experiment two showed that negative emotions (anger and anxiety) narrowed thought-action repertoires relative to neutral states (Fredrickson & Branigan, 2005). Expanding on this notion, Gable and Harmon-Jones (2008) conducted research examining attentional consequences of approach-motivated positive affective states. They argued that positive affect that is high in approach motivation should narrow attention as organisms shut out irrelevant stimuli as they approach the desired object. Their findings showed that high approach-motivated positive affect reduced attention while low approach-motivated positive affect increased attention.

Their findings supported Fredrickson's notion while expanding this understanding further by considering that positive affective states can be low in approach motivation such as joy experienced after watching a funny movie, or high in approach motivation, for example, desire experienced while approaching an attractive object (Gable & Harmon-Jones, 2010).

Further support for the build hypothesis was gathered from a field experiment with 139 working adults (Fredrickson et al., 2008). Half the group was randomly assigned to practice a seven-week loving-kindness meditation workshop in the context of a workplace wellness programme. Results showed that over time the meditation practice produced increases in daily experiences of positive emotions, which consequently produced increases in a range of personal resources such as increased mindfulness, social support, and a sense of purpose in life. Moreover, these increments in personal resources predicted increases in life satisfaction and reduced depressive symptoms. The authors argued that positive emotions are the mechanisms of change for mind-training practices such as loving-kindness meditation that promotes love and compassion for self and others (Fredrickson et al., 2008). However, interesting findings reported by Fredrickson et al. (2020) revealed that people who experienced negative affect during meditation would meditate less the following day. This suggests that the extent to which mind-training practices would build personal resources depends on the experience of positive affective states during the practice.

Promoting positive emotions could also be regarded as a positive preventative measure to buffer against the negative effects of stress on well-being. The undoing hypothesis suggests that positive emotions undo the lingering effects of negative emotions (Fredrickson, 2003). Evidence in support of this showed that the experience of positive emotions resulted in quicker cardiovascular recovery (baseline heart rate, blood pressure, and peripheral vasoconstriction) following anxiety and fear-provoking situations (Fredrickson & Levenson, 1998; Fredrickson et al., 2000). De Longis et al. (2020) investigated the relationship between

the inertia of negative emotions at work and parasympathetic nervous system activity, measured by vagally-mediated heart rate variability (HRV). They argued that temporal dependency on negative emotions at work might be associated with lower HRV, which is an important marker of the ability to adjust flexibly to changing circumstances (resiliency). Their findings indicated that participants with lower HRV showed high persistence of negative emotions at work. This offers further support for the undoing hypothesis from the opposite angle. People with high HRV tend to regulate their emotions better, while low HRV has been linked to negative affect and burnout (De Longis et al., 2020).

Fredrickson and Joiner (2002) and Burns et al. (2008) provided evidence that positive emotions, through their effect on broadened thinking, trigger upward spirals towards greater emotional well-being in the future. Initially Fredrickson and Joiner (2002) determined this by testing if positive affect and broad-minded coping (operationalised as taking a broad perspective on problems and generating multiple possible solutions to them) reciprocally and progressively predicted one another. A sample of undergraduate students ($n = 138$) completed self-report measures of affect and coping at two different times five weeks apart. Regression analysis showed that initial positive affect predicted improved broad-minded coping, and initial broad-minded coping predicted increased positive affect. A mediational analysis further indicated that positive affect and broad-minded coping improved one another serially (Fredrickson & Joiner, 2002). From this analysis, they proposed that this upward spiral can build psychological resources and improve people's lives over time. Positive emotions broaden both attention and cognition, facilitating coping with adversity and stress and predicting a greater likelihood of experiencing future positive emotions. Over time, this cycle facilitates the building of psychological resilience and enhanced emotional and psychological well-being (Garland et al., 2010; Ryff, 2014). In line with this, more recent findings by Chang et al. (2020) highlighted the role of optimism, in addition to coping, in predicting

hedonic well-being. Results from a hierarchical regression analysis demonstrated that coping behaviours accounted for a significant amount of unique variance in hedonic well-being, but when including optimism in the prediction model, they consistently found that it accounted for additional variance in hedonic well-being beyond coping behaviours (Chang et al., 2020). Fredrickson et al. (2020) also provided evidence supporting an upward spiral relationship between positive affect and positive health behaviours such as fruit and vegetable intake, physical activity, and meditation. Moreover, their within-person results showed that when participants engaged in the health behaviour more frequently than their daily average reported, there was a greater positive affect on that day. Between-person results indicated that participants who engaged in particular behaviours more frequently than others reported greater intensity of daily positive affect.

Burns et al. (2008) not only replicated the initial findings by Fredrickson and Joiner (2002) but expanded on them by assessing social resources of interpersonal trust and social support, in addition to coping, the cognitive resource assessed in the original study. They found that positive affect and interpersonal trust were mutually built on one another, but this was not demonstrated for social support. They explained this unexpected finding on the basis that social support is dependent on the behaviour of others as opposed to coping styles and trust, that are characteristics of an individual. Wang et al. (2020) found evidence to suggest that social support, particularly from family, can enhance subjective well-being.

2.1.3 The Architecture of Sustainable Happiness

Lyubomirsky et al. (2005) highlighted three arguments against the pursuit of happiness drawn from historical sources to illustrate the depth of pessimism that existed against the successful pursuit of happiness. The first is the notion of a genetically-determined set point (or range) for happiness that suggests that people eventually return to their baseline well-being despite short-term happiness variations. The authors highlighted evidence from

previous adoption and twin studies (e.g. by Lykken & Tellegen, 1996; Braungart et al., 1992, as cited in Lyubomirsky et al., 2005) that provided evidence for the heritability of well-being. The second piece of evidence they presented against the successful promotion of well-being centred on the link between psychological well-being and personality traits, which closely relates to the happiness set point. As personality traits are consistent across the lifespan and situations, these may account in part for the stability in people's set points. To demonstrate, Lyubomirsky et al. (2005) highlighted findings from McCrae and Costa (1990) that showed the long-term stability for the "Big Five" personality traits, including neuroticism and extroversion, the traits most closely related to well-being. For example, individuals tend to maintain the same rank ordering in rumination, worry, guilt, self-confidence, social engagement, and enthusiasm. McCrae and Costa (1990) argued that people tend to maintain a relatively stable level of happiness over time based on the notable relationship between personality characteristics and psychological well-being. Interestingly, in a recent study exploring the dynamic association between emotional states and job performance, De Longis and Alessandri (2020) controlled for neuroticism and conscientiousness as variables that may impact people's ability to regulate their emotional states. Finally, the hedonic treadmill theory proposed by Brickman and Campbell in 1971 is presented as the last source of pessimism against the pursuit of happiness. This notion suggests that any gains in well-being are temporary as people eventually adapt to change.

Lyubomirsky et al. (2005) highlighted three factors that influence people's chronic levels of well-being, factors they identified as having received the most attention in well-being literature. The first is the genetically-determined stable level of happiness, known as the happiness set point, demonstrated with long-term twin studies by Lykken and Tellegen (1996). This factor has been shown to account for around 50% of the variance in individual differences in well-being (based on Braungart et al., 1992, as cited in Lyubomirsky et al.,

2005; Lykken & Tellegen, 1996; Tellegen et al., 1988, as cited in Lyubomirsky et al., 2005) and concerns the role genes and personality traits play in holding levels of happiness relatively constant over time (Lyubomirsky et al., 2011). However, Diener et al. (2006) argued that people might have multiple set points which can change under certain circumstances. In line with this, Lyubomirsky et al. (2005) proposed a set range rather than a set point in that people might stay within the upper end of their range if relevant happiness factors continuously contribute positively to their lives. This also relates to the notion that positive emotions trigger upward spirals towards enhanced well-being (Burns et al., 2008; Fredrickson & Joiner, 2002).

The second factor is life circumstances, which have been found to account for approximately 10% of individual differences in well-being (based on Argyle, 1999; Diener et al., 1999, as cited in Lyubomirsky et al., 2005). Evidence has shown that changes in circumstances increase subjective well-being, but these changes are not enduring (Sheldon & Lyubomirsky, 2006). The hedonic treadmill theory explains why people remain relatively stable in their happiness levels despite changes in circumstances as they adapt and return to hedonic neutrality or their happiness set point (Diener et al., 2006). The happiness adaptation model proposed by Sheldon et al. (2013) recognised the paradoxical effect of positive life changes in that they can produce positive events that cause happiness boosts, but these events can also change one's standards and expectations which consequently diminish the happiness boost.

The third factor is positive activities which account for up to 40% of individual differences in well-being (Lyubomirsky et al., 2011). Positive activity change has been shown to bring about lasting gains in both subjective and psychological well-being (Sheldon & Lyubomirsky, 2006; Sheldon et al., 2010, 2013). Based on this, it was proposed that active

engagement in appropriate happiness-enhancing activities promises the most potential for sustainable increases in well-being (Lyubomirsky et al., 2005, 2011).

Lyubomirsky et al. (2005) argued that sustainable changes in well-being could be most successfully achieved through certain types of intentional activities despite the countering effects of adaptation, more so than through changes in circumstances (Sheldon & Lyubomirsky, 2006). This was supported by Diener et al. (2006), who proposed revisions to the hedonic treadmill model. They argued that the happiness set point is not as constant and neutral as suggested, that individuals differ in their adaptation to events, and that people's set points can change under certain conditions. Lyubomirsky et al. (2005) proposed an integrative model of happiness that accommodated the role of genetic/personality and demographic/circumstantial factors and transcended these cross-sectional factors to address the questions of maintained, within-subject change in well-being. This was achieved by incorporating the role of motivational and attitudinal dynamic, time-sensitive factors in one model. Person-activity fit, optimal timing, sustained effort, positive habits, and a variety of activities were identified as key factors in achieving sustained well-being through intentional activity.

According to this model of longitudinal well-being (Lyubomirsky et al., 2005), people have to actively choose to put in the effort to initiate and commit to appropriate happiness-enhancing activities over a prolonged period to increase their happiness. Sheldon and Lyubomirsky (2006) gathered preliminary evidence to support that intentional activity requires some degree of effort to initiate and sustain. These include behavioural activity (for example physical exercise or being kind to others), cognitive activity (reframing things in a more positive light, practicing gratitude and mental focus), and volitional activity (pursuing important personal goals such as improved relationships and personal growth).

Lyubomirsky et al. (2011) confirmed that people's motivation, expectations, and diligence play a key role in improving and maintaining positive changes in well-being. Their research highlighted the role of participant self-selection, motivation to change, and willingness to commit to happiness-enhancing activities. Results showed that participants who selected themselves into the happiness intervention reported greater well-being boosts than those who did not as well as those in the control group. They also found that the amount of effort applied to the intervention activities, expressing gratitude and imagining best future selves, was directly related to improved well-being. Including a control group provided evidence that practicing activities appropriate for enhancing well-being is necessary to bring about enhanced well-being. This evidence supports the use of self-selected sampling in happiness enhancement interventions and the necessity of using activities that have been demonstrated to improve well-being (Sheldon et al., 2013).

Another important factor in the sustainable happiness model is a variety of activities (Lyubomirsky et al., 2005). This factor is instrumental in countering the effects of adaption and promoting lasting well-being increases. Sheldon et al. (2013) provided evidence from two longitudinal studies, one correlational ($n = 134$) and the other experimental ($n = 52$), which supported the important role of variety in countering adaptation and prolonging well-being. The correlational study offered evidence that the degree of variability associated with a positive life change helped to maintain the longer-term effects of those changes on well-being. The experimental study demonstrated that higher sustained well-being was derived among participants randomly assigned to practice varied kindness activities compared to those assigned to less varied activities. These findings demonstrate that varying how positive activities are performed may play a crucial role in determining whether the activity has durable effects on well-being.

This model proposes using happiness-relevant behavioural, cognitive, and goal-based activities as the most promising means for bringing about sustainable increases in well-being. Moreover, these activities should be practiced in varied ways to counter the effects of hedonic adaptation (Sheldon et al., 2013). The research also demonstrated the value of participant motivation and willingness to apply enduring effort (Lyubomirsky et al., 2011).

2.2 The Guiding Yoga Philosophy

Yoga is one of the six schools of Vedic philosophy traced back to ancient India (Desikachar & Krusche, 2007). In a more general modern-day view, yoga is regarded as an ancient mind-body practice that promotes physical and mental well-being (Büssing et al., 2012; Woodyard, 2011). Desikachar (1995) explained that yoga offers different methods for attaining clarity of mind, each with a unique emphasis. Some of these yoga methods or paths include the following: Bhakti yoga, with its focus on devotion; Karma yoga, commonly known as the yoga of action and selfless service; Jnana yoga, emphasising the search for real knowledge; Tantra yoga, where the focus is on the body and a range of connections and relationships between the body and other aspects of the world and cosmos are made; Raja yoga with the focus on meditation as one strives to gain control over mental faculties, and its branch Hatha yoga, which is the science and practice of physical health and well-being. The most common use of the term yoga in modern society refers to Hatha yoga, with its main emphasis on cultivating physical health and well-being through the utilisation of numerous tools including body postures, breathing practices, and a life of right action (Belling, 2001). The tools of Hatha yoga are instrumental in helping the practitioner gain control over the mental faculties to find a state of inner peace and well-being (Desikachar, 1995).

The yoga philosophy offers a variety of mind-body and behavioural practices that have been empirically shown to reduce stress (Pascoe et al., 2017), improve emotional functioning (Menezes et al., 2015), and promote general well-being (Woodyard, 2011). It

entails several components that offer various therapeutic effects and the ability to holistically enhance well-being (Kishida et al., 2018; Woodyard, 2011). As indicated, the yoga system has many branches, of which Raja yoga and Hatha yoga are but two (Belling, 2001; Desikachar, 1995). While the main emphasis of Raja yoga is on gaining control over one's mind, Hatha yoga is primarily concerned with the health and well-being of the physical body, the vessel that houses the mind. These two branches are, therefore, perhaps more complementary than any of the others. In yogic philosophy, it is commonly proclaimed that the mind and body are intricately connected, and that physical disease or ailments are the biggest hindrance to mental clarity and spiritual growth (Desikachar & Cravens, 1998). This notion also corresponds to Maslow's (1943) hierarchy of needs which indicates health as a lower order need and self-actualisation as a higher-order need. However, for some, the onset of a serious illness can also catalyse spiritual awakening and growth (Tolle, 2005).

Patanjali's Yoga Sutra, the classic exposition of Raja yoga, which systematised core aspects of yoga, is perhaps the most well-known seminal yogic text (Desikachar, 1995; Siegel et al., 2016; Saraswati, 2013a; Woodyard, 2011). In a collection of 196 sutras or aphorisms, traditionally written in Sanskrit, the sage Patanjali divided the path of Raja yoga into eight stages, classically referred to as the eight limbs of yoga (Desikachar, 1995; Saraswati, 2013a). The eight limbs comprise the following:

1. Yama or social code. This pertains to a person's attitude and behaviours towards others and the environment.
2. Niyama, or personal code, concerns a person's attitude towards themselves;
3. Asana, or postures, entails the practice of physical body exercises;
4. Pranayama, the practice of breathing exercises aimed at controlling prana or life force;

5. Pratyahara, the withdrawal of the senses from the external to the internal environment;
6. Dharana, concentration or the ability to direct one's mind;
7. Dhyana, meditation; and
8. Samadhi, transcendental consciousness.

The above description indicates that the system of Hatha yoga is a branch of Raja yoga. Moreover, within the branch of Hatha yoga, there are numerous different schools, each with its own style of practice. Sivananda yoga, Iyengar yoga, Ashtanga yoga, and Kundalini yoga are but a few examples of the numerous off-shoots of Hatha yoga (Belling, 2001). Each of these styles takes on a unique approach to the practice of yoga, particularly in the practice of asana—the physical body postures—and the use of breathing exercises. Belling (2001) identified six basic elements that are integral aspects of most Hatha yoga styles or schools. These elements include: 1) physical postures; 2) breathing practice; 3) relaxation; 4) meditation; 5) diet; and 6) a life of right action. These elements are all grounded in the core yoga philosophy, the Yoga Sutra by Patanjali. The core components of yoga outlined in the Yoga Sutra are prescribed as the means to achieve well-being gradually through self-realisation (Desikachar, 1995).

Desikachar (1995) explained that the first five components of Raja yoga are more external, less abstract, and, therefore, an easier starting point for most people. However, there is no prescribed or set order to approach and study these components. The elements of Hatha yoga highlighted by Belling (2001) are all embedded in the first five components, arguably, except for meditation which is said to only truly happen during dhyana and samadhi (Desikachar, 1995). However, pratyahara, the withdrawal of sense perception, is the first step towards reaching a meditative state, and for many people, this is considered meditation (Desikachar, 1995). Yoga Nidra, a relaxation and meditation technique adapted by Swami

Satyananda Saraswati from the traditional tantric practice of nyasa, is essentially a method of Pratyahara (Saraswati, 2013b). Satyananda explained that nyasa entailed blessing the physical body by instilling higher awareness into various parts during tantric ritual practices involving using specific mantras or chants placed, felt, or experienced at different body parts. This practice formed the basis of the rotation of consciousness, characteristic of Yoga Nidra, a technique designed to bring about a deep state of physical, mental, and emotional relaxation.

Belling's (2001) element, a life of right action, points to the principle of unity, commonly offered as a translation of the word yoga (Desikachar, 1995). Yoga is about the holistic well-being of the body, mind, and soul (Cahn et al., 2017; Woodyard, 2011). The yoga philosophy teaches that our thoughts and actions have consequences, strongly influence our state of being and that humans and nature are interconnected (Desikachar, 1995). A life of right action entails the first two components highlighted in the Yoga Sutra, yama and niyama. These are life principles, also called the ethics of yoga practice, which can enhance our sense of well-being (Kishida et al., 2018). There is empirical support that a regular yoga practice and adopting and implementing these yogic principles in everyday life can enhance subjective well-being (Malathi et al., 2000). The various aspects of yama and niyama focus on the way we relate to ourselves and conduct ourselves in relation to the world around us (Siegel et al., 2016) and correspond to the psychological and social aspects of well-being identified by Keyes (1998, 2002), both on the intrapersonal and interpersonal levels (Kishida et al., 2018). Yama comprises the following aspects, as interpreted by Desikachar (1995):

1. Ahimsa—non-violence, kindness, and friendliness. This aspect entails thoughtful consideration for all living things, especially those who are in difficulty, innocent, or worse off than we are. This practice also means that we should act kindly toward ourselves.

2. Satya—truthfulness. The focus in satya is on right communication through writing, speech, actions, and gestures. This practice should never conflict with the principle of ahimsa. If speaking the truth could cause harm, it should rather not be spoken and each individual should practice this with discretion.
3. Asteya—non-stealing. Asteya is the principle of not taking anything that does not belong to us and resisting the desire for what does not belong to us.
4. Brahmacharya—a movement toward the essential. This practice relates to moderation in all actions. This principle makes one mindful of the use of energy in daily life, preserving the vital life energy (prana) for productive growth and not wasting it on trivial matters and habits that compromise our well-being.
5. Aparigraha—non-attachment. This entails practicing non-greediness or accepting only what is appropriate.

Niyama comprises:

1. Saucha—cleanliness of our bodies and surroundings. Saucha also relates to clearing out mental clutter and keeping one's thoughts pure and positive. Positive thinking is much related to this aspect.
2. Samtosa—modesty. Contentment or being comfortable with what we have and do not have. The practice of gratitude corresponds strongly with this principle.
3. Tapas—this practice refers to the activity of keeping the body fit. It entails the removal of impurities in our mental and physical systems through the maintenance of correct habits such as sleep, exercise, proper nutrition, work, and relaxation. The practice of body postures, or asana, and breathing exercises, or pranayama, play a key role here, but it encompasses general mindfulness of healthy habits.

4. Svadhayaya–self-inquiry and examination. This practice entails the study and the necessity to review and evaluate our progress and features self-reflection and contemplation of inspirational or religious text.
5. Isvarapranidhan–reverence to a higher power or the acceptance of our limitations. This also entails the practice of surrendering that which one cannot control and complete detachment regarding a particular outcome, a complete acceptance of what is.

In addition to these sets of principles targeted at aspects associated with psychological and social well-being, the practice of physical body postures, controlled conscious breathing, relaxation, and focused concentration primarily work on regulating the nervous system and target aspects associated with emotional well-being and enhanced physical health (Lutz, 2014; Sianoja et al., 2018; Woodyard, 2011).

The next section describes the relationship between the framework concepts and how these relate to this study. This description is necessary to tie the components together and demonstrate how the framework guided and informed the various research processes (Green, 2014; Rocco & Plakhotnik, 2009).

2.3 Overview of the Framework and Relationship Between Key Concepts

The above discussions of each of the concepts' theoretical underpinning are included in the framework, illuminating the particular background of each. The mental health continuum operationalised mental health as a multi-dimensional concept covering hedonic and eudaimonic aspects of well-being. The broaden-and-built theory provided insights into the value of positive emotions, a component of mental health, and the underlying mechanisms of how it relates to well-being. The model of sustainable happiness proposed using varied, happiness-relevant activities as the most promising method for effecting durable increases in well-being. Finally, the yoga philosophy offers a range of empirically valid

strategies that can serve as wellness promotion tools in a PPI. The relationship among all the concepts described is explained within the context of the study. The study set out to explore and describe the effectiveness and feasibility of using a yoga-based PPI to promote well-being in a workplace setting. The selected concepts aided the investigation, interpretation, and understanding of this enquiry.

The concept of flourishing mental health drawn from Keyes' (2002) mental health continuum concerns well-being's emotional, psychological, and social aspects. Following the mental health continuum's notion of flourishing mental health, the broaden-and-built theory (Fredrickson, 2001) explains the value associated with positive emotion, a component of emotional well-being, how it serves a positive preventative function against the effects of stress and contributes to long-term well-being. The theory suggests that positive emotions can undo the negative impact of stress and build physical, cognitive, psychological, and social resources supporting long-term well-being (Spreitzer & Hwang, 2019). This premise ties in with all three well-being dimensions of the mental health continuum.

The broadened attention and cognitive faculties, as well as the enhanced prosocial behaviour associated with the experience of positive emotions, could arguably promote work engagement (Bakker et al., 2011; Fredrickson, 2003; Keyes et al., 2000; Lyubomirsky et al., 2005; Salanova et al., 2013). Employees who experience positive mental health could be expected to solve work-related problems better and have more energy and rigour to perform their tasks (Diener et al., 2020; Madrid & Patterson, 2020). This premise ties in with the proposal by Stelzner and Schutte (2016), who advanced the notion of employees flourishing as a long-term strategy for organisational performance by arguing that providing employees with the experience of flourishing motivates them to sustain the enterprise that provides it. The Healthy and Resilient Organisations' (HEROs) model (Salanova et al., 2013) also

proposed strategies for promoting resilient organisations that could endure the numerous challenges of modern society.

Salanova et al. (2013) reviewed research conducted on interventions that promote HEROs based on positive psychology from an organisational (collective) and employee (individual) point of view. The HERO model proposes a link between healthy organisational resources and practices (social resources and health practices), healthy employees (who display positive emotions, resilience, and work engagement), and healthy organisational outcomes (including organisational commitment and performance). Individual-based positive intervention strategies elicit positive emotions, promote prosocial behaviour in the workplace, and increase employee well-being and the social, and organisational climate. Individual-based positive interventions are described as behavioural, cognitive, and volitional (Salanova et al., 2013). This ties in with the premise proposed in the happiness model by Lyubomirsky et al. (2005), proposing happiness-related behavioural, cognitive, and volitional activities as a viable means to effect sustainable enhancements in well-being. It was demonstrated that the yoga system offers a variety of happiness-relevant tools (physical, behavioural, cognitive, and volitional) to serve as PPI components to promote hedonic and eudaimonic aspects of well-being.

Using a range of yoga tools as the basis for PPI would target well-being holistically by combining a variety of behavioural, cognitive, and volitional activities that have been supported with empirical research to promote various aspects of the hedonic and eudaimonic domains of well-being (Hartfiel et al., 2012; Ivtzan & Papantoniou, 2014; Malathi et al., 2000). Moreover, Desikachar (1995) emphasised that the attainment of well-being (defined as freedom from suffering) requires constant effort and comes about through gradual progression. This emphasis is also in line with the necessary aspects for sustained increases in happiness as proposed by Lyubomirsky et al. (2005) and the continuous and sustained efforts

required from positive workplace interventions to promote improved health and well-being at collective and individual levels (Salanova et al., 2013). The various practices of the yoga system have been shown to serve as viable means to promote well-being holistically if practiced diligently over time. They can therefore be considered as appropriate tools for a workplace PPI.

Some of the elements associated with yoga practice, such as body postures, relaxation, and breathing exercises, work on calming the mind and nervous system that help to stabilise emotions (Cahn et al., 2017; Desikachar, 1995). Regular practice of these elements could be expected to positively impact emotional well-being (hedonic domain). Moreover, the regular practice of physical yoga poses also can impact aspects such as mastery, autonomy, self-acceptance, and personal growth associated with psychological well-being (eudaimonic domain). It has been proposed that overcoming physical challenges with one's body could precipitate one to achieve psychological shifts (Cramer et al., 2013; Mrazek et al., 2016).

Moreover, the application of the yogic principles of yama (attitudes toward our environment and others) and niyama (attitudes toward ourselves) can be expected to impact psychological and social well-being as it deals with attitudes towards ourselves, others, and the environment, which in turn promotes the development of personal resources conducive to well-being (Fredrickson, 2003; Woodyard, 2011). The components of the yama and niyama also resonate with Aristotelian ethics that formed the basis for psychological well-being as originally propounded by Carol Ryff (1989, 2014). Aristotle's ethics also underpin the virtue philosophies in the positive psychology framework that propose that individual character strengths should be utilised in developing and maintaining well-being as they enable pleasure and other positive experiences (Lambert et al., 2015). Moreover, these yogic principles also correspond with other empirically valid methods to promote well-being, such as committing

acts of kindness, practising gratitude, and being mindful of the good things in one's life (Salanova et al., 2013; Sheldon et al., 2013).

Motivation, willpower, and enduring discipline are important components of the self-regulatory effort to maintain intentional activities (Lyubomirsky et al., 2011). People vary in their ability to get started with goals and offering people optimal opportunity and motivation to engage in happiness promotion activities in the workplace. This variation could be a strategic way to encourage people to pursue well-being promotion activities while assisting with the issue of work-life balance, which is important for work performance (Salanova et al., 2013; Stelzner & Schutte, 2016; Timms et al., 2015). One of the aims of the yoga-based PPI was to offer interested employees an opportunity to practice disciplined effort over time and establish a variety of habits conducive to enhanced emotional, psychological, and social aspects of well-being that could generate benefits across life domains (Timms et al., 2015). The programme was designed to progress in successive stages and teach new techniques progressively, in line with Desikachar's (1995) principles of practice and the happiness model, as a strategy to counter the effects of hedonic adaptation (Lyubomirsky et al., 2005; Sheldon et al., 2013). This study was specifically designed to explore how intentional activities following yoga principles, presented as a workplace PPI, can produce positive changes in mental health, work engagement, and affective states and reduce perceived stress.

2.4 Chapter Summary

The chapter described the study's conceptual framework that informed different aspects of the research, from its conceptualisation to the development of the wellness intervention and the interpretation of the various outcomes. Two theoretical domains, positive psychology and yoga philosophy, were discussed, from which the different framework concepts were drawn. Framework components from positive psychology included the mental health continuum, the broaden-and-build theory of positive emotion and the model for

sustainable well-being, which proposed happiness-relevant activities as the most promising means to attain elevated levels of well-being. It was shown that the yoga philosophy offers viable tools to inform a PPI for holistic wellness promotion.

The next chapter offers an in-depth look at previous research on well-being and its relevance in the workplace. A critical review exploring yoga as a workplace PPI is provided next to discuss available literature related to well-being and its importance in the workplace, well-being interventions in workplace settings, as well as yoga and its impact on well-being outcomes. This discussion aims to support the usefulness of a yoga-based PPI in the context of a South African HEI.

3 Chapter Three: Literature Review

This chapter presents a critical review of existing research related to workplace wellness promotion to situate the study further within the current body of knowledge. The broad focus of the review is to justify the selection of the study variables and illuminate how workplace wellness interventions target these well-being dimensions. The discussion commences with an introduction to workplace well-being with reference to positive psychology and particular limitations noted in the existing literature. Following on, emotional well-being, positive functioning, work engagement, and perceived stress as the main dimensions focused on are described. The particular value of each is indicated, and support for promoting these indicators through workplace interventions is considered. Research on yoga and its impact on well-being is discussed to demonstrate how it can serve as a tool for targeting the selected well-being indicators. Finally, the need for well-being interventions in the South African HEI context is justified as the selected focus area.

3.1 Introduction to Workplace Positive Psychology Research and Workplace Well-being

Psychological well-being theories have been widely adapted to conceptualise workplace well-being (Grant & McGhee, 2020; Mills et al., 2013; Spreitzer & Hwang, 2019). Trends in workplace positive psychology research include constructs such as flourishing, thriving, resilience, gratitude, character strengths, psychological capital, work engagement, and positive co-worker relations, all of which are common predictors of well-being and play different roles within workplace settings (Donaldson et al., 2015; Grant & McGhee, 2020; Mills et al., 2013; Spreitzer & Hwang, 2019). De Simone (2014) and Fisher (2014) highlighted that well-being at work is multidimensional comprising hedonic, eudaimonic, and social aspects.

Hedonic constructs relate to experiencing a pleasant life and feelings or moods experienced daily, which may fluctuate more on a short-term basis (Fisher, 2014; Grant & McGhee, 2020; Madrid & Patterson, 2020). Cooke et al. (2016) and Fisher (2014) asserted that subjective well-being is the most prominent hedonic model, described as a tripartite model comprising positive cognitive evaluations of life satisfaction, the presence of frequent positive affect, and infrequent experiences of negative affect. Proponents of the hedonic perspective tend to conceptualise well-being in terms of all three of these constructs (Cooke et al., 2016).

Eudaimonic well-being is more concerned with living a good life, as opposed to the pleasant life of the hedonic perspective. The eudaimonic dimension includes components related to meaning, purpose, right action, and personal growth (Fisher, 2014; Grant & McGhee, 2020). The psychological well-being model is one of the most well-known eudaimonic well-being models. It generally focuses on more life domains than hedonic models (Cooke et al., 2016; Grant & McGhee, 2020). In sum, hedonic well-being emphasises feeling good, and eudaimonic well-being emphasises functioning well and developing one's potential (Grant & McGhee, 2020; Straume & Vittersø, 2015).

The social aspect of workplace well-being, which also falls under the eudaimonic dimension, is less developed (Grant & McGhee, 2020). As opposed to psychological well-being—which is more personally orientated—social well-being is more outwardly directed. It specifically acknowledges the importance of social relationships for human well-being (Fisher, 2014). Rothmann (2013) emphasised the importance of including a social component of well-being within the South African context as it closely relates to the notion of ubuntu, the African concept of interconnectedness. Keyes (1998) developed a five-component model of social well-being (including social contribution, social integration, social actualisation,

social acceptance, and social coherence) that also reflects on the social activity of a person in the work context (Grant & McGhee, 2020).

Although scholars disagree on how hedonic and eudaimonic dimensions contribute to overall well-being, there is substantial support that all three aspects (hedonic, eudaimonic, and social well-being) are highly correlated and combine to indicate overall well-being (De Simone, 2014; Fisher, 2014; Grant & McGhee, 2020). In the current study, Keyes' (2002) mental health continuum model reflects all three aspects of well-being. The construct emotional well-being represents the hedonic dimension, while positive functioning and work engagement represent the eudaimonic dimension. Fisher (2014) highlighted that indicators for well-being at work could include (positive) indicators for high well-being, such as flourishing mental health, positive and negative emotions and moods at work, work engagement, and (negative) indicators of low well-being, such as burnout. Perceived stress was selected as a low well-being indicator for this study, which will be discussed in more detail later. Donaldson et al. (2019) also emphasised the importance of studying negative indicators in PPI studies. Their meta-analysis evaluating workplace PPI studies demonstrated that PPI is just as effective for targeting the reduction of undesirable aspects as it is for promoting the positive.

Definitions, conceptualisations, and measurements of well-being in organisational contexts vary greatly (Cooke et al., 2016; De Simone, 2014; Donaldson et al., 2015; Fisher, 2014; Grant & McGhee, 2020;). Within the hedonic stream, terms such as positive mental health, well-being, happiness, and life satisfaction are often used interchangeably (Donaldson et al., 2015; Rana, 2015). Psychological well-being, eudaimonic well-being, and flourishing are terms used interchangeably within the eudaimonic stream (der Kinderen & Khapova, 2020). Within this study, mental health flourishing, happiness, and work engagement refer to

employee well-being as a multidimensional construct, including aspects of hedonic, eudaimonic, and social well-being.

While positive psychology research in work contexts is increasing (Mills et al., 2013), studies are published mainly from predominantly English-speaking, Western countries (Donaldson et al., 2019, 2015). Moreover, a review by Vazquez et al. (2018) assessing psychosocial factors at work within Brazilian and other international studies—from Europe, Asia, North America, Oceania, and Africa—confirmed a need for more research using a positive psychology approach. The majority of papers in their review focused on work stressors at the expense of analysing protective factors that could promote healthy aspects in the workplace (Vazquez et al., 2018). This research demonstrates a need for strength-based research in workplace settings, including contexts such as South Africa. Moreover, many PPI studies have also been conducted in industrialised Western countries with highly educated, high-earning samples (also known as WEIRD) (Hendriks et al., 2018).

Although a steady increase in research from non-Western countries emerged since 2012, there is still a need for more well-being research to be conducted in non-Western contexts with a more diverse range of samples specifically related to PPI studies in workplace settings including healthy adults (Hendriks et al., 2018). Leventhal et al. (2015) conducted a randomised controlled trial of a five-month resilience-based programme among Indian rural adolescent girls. Eloff et al. (2014) conducted a randomised clinical trial of a 24-week intervention to promote resilience in young children of HIV-positive mothers in the South African context. Van Schalkwyk and Wissing (2013) evaluated the effect of an intervention to improve levels of psychosocial well-being in a group of South African learners between the ages of 15 to 17 years through a mixed method research approach. A PPI study by Appiah et al. (2020) in Ghana examined the effectiveness of a 10-week multicomponent intervention in promoting positive mental health and reducing symptoms of depression and negative affect

among an adult sample in a rural, poor context using a quasi-randomised controlled trial design. The focus areas of these studies conducted in settings other than commonly considered as Westernised countries demonstrate the need for PPI studies in workplace settings, including healthy adults.

Mills et al. (2013) highlighted the need to explore the longer-term effects of positive psychology principles in workplace settings. It has also been noted that positive psychology activities such as acts of kindness, mindfulness, and physical activities were used considerably less often in non-Western countries (Hendriks et al., 2018). The knowledge gap identified in the reviewed literature indicates a need for research that applies a multicomponent PPI within the South African context on a longer-term basis, including a sample of healthy working adults. The next section delves deeper into the value of well-being in workplace contexts and workplace wellness interventions targeting various well-being dimensions.

3.2 The Value of Well-being and Well-being Interventions in the Workplace

Workplace well-being holds potential individual and organisational benefits such as healthier, more energetic, and inspired employees who experience greater job satisfaction, are more engaged in their work, and display less intention to leave (Donaldson et al., 2019; Moller & Rothmann, 2019; Salanova et al., 2013; Spreitzer & Hwang, 2019). However, scholars have cautioned that organisations should guard against pushing employee wellness as a mere drive to work harder and perform better solely for institutional benefit. Organisations must appreciate the broader canvases of workers' lives because well-being is important to people both in general and in their place of work (Fisher, 2014; Timms et al., 2015).

Salanova et al. (2013) highlighted the value of using individual-based positive interventions to promote workplace well-being. These strategies entail individuals' core

values, preferences, and interests which are ultimately about knowing oneself and could be applied not only at work, but generate benefits across life domains (Salanova et al., 2013; Timms et al., 2015). Individual-based strategies may target behaviour, beliefs, goals and motives and may benefit work engagement, pro-social behaviour, and social climate. Some examples include practising virtues and being kind to others (behavioural strategies), practising gratitude and savouring (cognitive strategies), and setting and pursuing personal goals (volitional strategies) (Salanova et al., 2013). Experiences of receiving general well-being resources from the workplace send an underlying message that the employees are cared for and valued not just as assets for organisational performance but as human beings. Individual-based positive interventions can therefore serve as resources that enable employees to thrive as better workers and human beings (Timms et al., 2015). Spreitzer and Hwang (2019) argued that individual thriving could enable psychologically healthy workplaces, as thriving at work has been shown to influence individual health and development positively. Offering individual-based positive interventions that target personal aspects of workers is, therefore, less likely to be perceived as a mere driver to increase productivity as employees gain benefits of personal value in multiple life domains.

Stress, anxiety, and depression are common conditions that negatively impact employees' well-being to the detriment of organisational performance and are an ever-growing concern (Poalses & Bezuidenhout, 2018; Rana, 2015). The effort-reward imbalance model posits that work stress results from an imbalance or little reciprocity between efforts and reward which place the worker in a continuous state of arousal that can lead to detrimental health outcomes such as body pain, reduced vitality, and compromised mental health (Vazquez et al., 2018). Offering workplace wellness activities to combat fatigue could benefit employees' sense of well-being as it serves as a reward for their work efforts. Moreover, a meta-analysis by Sirois et al. (2014) revealed that self-compassion was

positively associated with the practice of health-promoting behaviours, which supports the value of well-being activities on physical health. Rana (2015) suggested that positive feelings and thoughts are valuable resources that can preserve mental health during stressful times while protecting employees' physical health. The cultivation of self-compassion and positivity are common aspects targeted in PPIs. Offering programmes that promote flourishing mental health among employees seems to be a plausible long-term strategy for greater organisational performance, benefiting employees and organisations alike as it serves as a protective resource against stress while also promoting better performance (Spreitzer & Hwang, 2019; Stelzner & Schutte, 2016).

Well-being interventions in the workplace take many different forms. According to Vyas-Doorgapersad and Surujlal (2015), workplace wellness is an umbrella term that refers to improving employees' medical, physical, emotional, psychological, and spiritual health. They described workplace wellness as encompassing activities designed to instil healthy behaviour in the workplace by enabling people to improve and develop control over their health and well-being. Keeman et al. (2017) proclaimed that workplace well-being interventions were traditionally aimed at reducing stress to increase employee well-being.

Existing literature reveals reactive and proactive approaches to workplace wellness. Reactive approaches are problem-solution-focused and generally address issues affecting work productivity and performance (Petzer & Schoeman, 2005), including addressing work-related conflicts (Vyas-Doorgapersad & Surujlal, 2015). In contrast, proactive approaches aim to support the development and maintenance of health-related behaviours that are conducive to well-being by taking preventative measures to enhance employee and organisational wellness, for example, health information, fitness, and stress management (Fenton et al., 2014; Vyas-Doorgapersad & Surujlal, 2015). PPIs entail practical ways of enhancing well-being and would therefore be considered a proactive approach to employee

wellness when applied in workplace settings (Seear & Vella-Brodrick, 2013). PPIs are designed to promote positive emotions, thoughts, and behaviours to enhance a sense of well-being (Hendriks et al., 2019; Koydemir et al., 2020). When applied in a workplace context, PPIs commonly aim to improve important work-related outcomes such as increased work engagement and reduced job stress. Positive psychology intervention has been defined as an intentional activity that promotes positive subjective experiences, positive traits, and or positive institutions as part of, or a by-product of, an organisational intervention (at the individual, team, or organisational level) (Donaldson et al., 2019).

The main premise of both reactive and proactive approaches to workplace wellness is to promote health and reduce negative costs and implications associated with poor employee health and well-being (Fenton et al., 2014). However, reactive programmes might be more likely stigmatised as they cater mainly to those experiencing problems or difficulties. This perception may discourage employees from using these services, particularly mental health promotion programmes (Dobson et al., 2019). Echoing this, Donaldson et al. (2019) confirm this argument stating that psychological pathways in interventions outside of the positive psychology field are focused on problem-solving and restoring normal functioning through mechanisms predicated on fixing issues in the workplace. On the other hand, positive psychology mechanisms focus specifically on building personal psychological strengths to enhance well-being. It can be argued that PPIs cater to anyone interested in self-improvement and are less likely to be stigmatised. However, interesting findings by Täuber et al. (2018) revealed that workplace health promotion programmes—characteristically considered more proactive—led to weight stigma and weight discrimination, particularly when they emphasised individual responsibility for health outcomes. This finding demonstrates that great care should be taken in workplace wellness promotion to avoid unintended negative consequences, even when applying positive psychological principles (Held, 2004).

Emotional well-being, positive functioning, work engagement, and perceived stress as a threat to workplace well-being are explored in more depth next. Each construct is described, and its particular value in the workplace is discussed. Examples of interventions targeting particular dimensions are highlighted. Emotional well-being and positive functioning are explored as two dimensions of workplace well-being. Kumar et al. (2020) showed that well-being is a driver of work engagement. Work engagement is also regarded as a eudaimonic well-being dimension in organisational well-being literature (Grant & McGhee, 2020). The association between employee well-being and work engagement is an important motivation for corporate leaders and human resource managers to invest in positive workplace interventions aimed at wellness promotion in that it benefits organisational outcomes (Donaldson et al., 2019). Perceived stress is regarded as the primary threat to employee well-being as it is an individual's perception of their inability to cope with demands detrimental to one's sense of well-being. When a person can perceive challenges in a more positive light, it can serve as a protective factor against life and work stressors (Pérez-Fuentes et al., 2019). Next, we turn to the concept of emotional well-being.

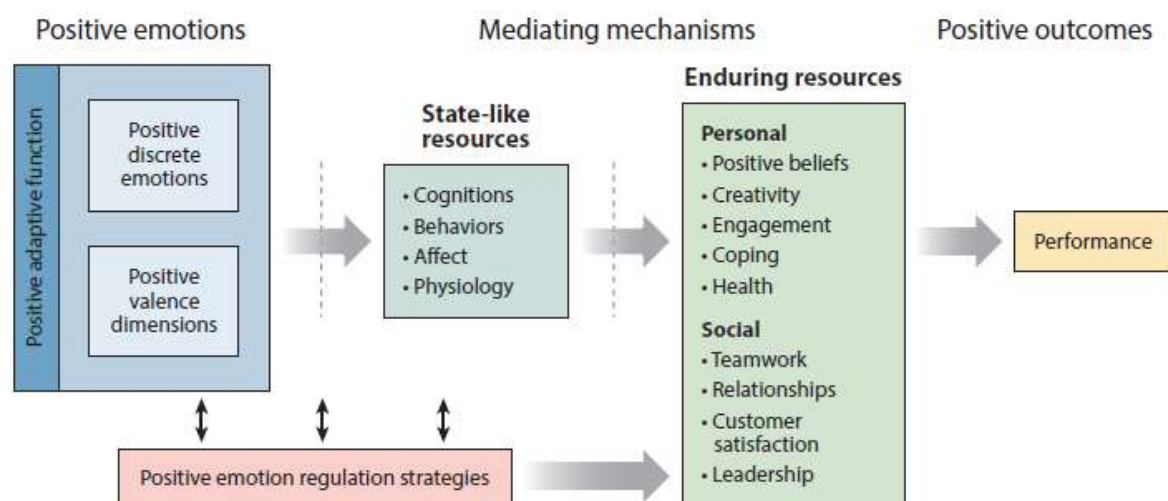
3.2.1 Emotional Well-being

In this study, affect and life satisfaction serve as the main hedonic dimensions of emotional well-being. Affective states are intimately connected to employees' well-being, attitudes, behaviours, and organisational effectiveness (Biggio & Cortese, 2013; De Longis & Alessandri, 2020; Diener et al., 2020), all of which impact on the quality of work life which can in turn promote life satisfaction (Alrawadieh et al., 2020). In this section, research on how affective states and life satisfaction impact various employee and organisational outcomes is explored to highlight the value of promoting workplace well-being interventions targeting these hedonic dimensions.

Diener et al. (2020) reviewed literature on positive emotions in the workplace and devised a model depicting the positive adaptive function of positive emotions and the resulting mediating mechanisms, which lead to better performance as a positive outcome (see Figure 3.1). In this model, positive emotions are regarded in terms of discrete emotions (psychologically meaningful units that have unique organisational significance) and valence dimensions (negative to positive). These two perspectives are prevalent in organisational research. Discrete, positive emotions include interest, joy, contentment and love—similar to the positive states referred to in the broaden-and-built theory. Positive valence dimensions are typically measured using a composite of positive emotional terms, as in the Positive and Negative Affect Schedule (PANAS).

Figure 3.1

Model Linking Positive Emotions to Positive Organisational Outcomes



Adopted from Diener et al. (2020)

This model is useful to visually depict the value of positive emotions in workplace settings by applying the broaden-and-built theory. Diener et al. (2020) proposed that positive emotions—enhanced by positive emotion regulation strategies—can promote state-like

resources, including cognitions, behaviours, affect, and physiology, that promote a range of enduring personal and social resources that positively impact work performance. De Longis et al. (2020) expanded on this by arguing that emotions influence workers' attitudes, cognition, behaviour and their outcomes in terms of productivity and social climate. Salanova et al. (2013) highlighted that individual-based PPIs aim to increase individual employees' level of happiness. These interventions may therefore serve as a means to build resources conducive to well-being and, in turn, positively impact organisational outcomes.

First, the value of positive emotions on organisational outcomes is explored. Research by De Longis and Alessandri (2020) showed that workers reporting a higher level of overall positive emotions reported an increase in their subsequent job performance evaluation measurement. These findings suggest that the experience of positive emotional states at work may positively impact job performance, demonstrating the positive emotions' upward-spiral effect proposed by Fredrickson and Joiner (2002). This finding also supports the model by Diener et al. (2020) indicating that employees' positive emotions have positive adaptive value in that it increases evaluated job performance which represents state-like resources (cognitive) and enduring resources (positive belief) as the mediating mechanisms that could benefit performance outcomes. Applying the affect-as-information theory, Madrid and Patterson (2020) also highlighted that affect conveys information about contextual conditions, such as threats to and opportunities for one's well-being and performance, which shape cognition and action tendencies. This would explain why positive emotions could confirm increased job performance during evaluation, as demonstrated by De Longis and Alessandri (2020), and highlights the institutional value of promoting positive affective states of employees. However, further support for this is needed using more objective job performance outcomes.

While positive emotions benefit organisational outcomes, on the one hand, negative affective states, on the other hand, have less desirable consequences. Using a diverse sample of employees who worked directly with the public ($n = 120$; 7.5% from the education sector), De Longis et al. (2020) found support for the association between the temporal dependency of negative emotions and low heart rate variability, which has been linked to poor emotional adaptation. For example, when negative emotional states prevail, employees' ability to adapt their emotional states to work events and occurrences is reduced—as low heart rate variability reduces emotional adaptation. They further concluded that workers experiencing exhaustion may have depleted the resources necessary to regulate their emotions, leading them to get stuck in their negative emotional state. Although correlations indicate associations between variables, it does not confirm causal relationships. However, possible support for this comes from laboratory tests by Gailliot et al. (2007) that showed self-control reduced blood glucose levels. This reduction demonstrates that self-control requires a certain amount of glucose to operate unimpaired, and when depleted, it would hamper optimal emotional regulation and result in feeling emotionally exhausted. This indicates that emotional regulation requires and uses energy. When employees feel depleted and low on energy, their ability to regulate their emotional responses is compromised. This can negatively affect organisational behaviour and employee well-being (De Longis et al., 2020).

Some have argued that strategies such as physical exercise, yoga, and meditation that reduce stress symptoms leading to exhaustion are effective for increasing heart rate variability and can assist workers to regulate their emotions better and manage stress more effectively (De Longis et al., 2020; Vinay et al., 2016). However, authors of review studies reported that evidence for the effect of yoga on heart rate variability should be interpreted with caution (Posadzki et al., 2015; Tyagi et al., 2016). Moreover, outcomes from a randomised controlled trial exploring the effect of a 10-week lunchtime yoga programme

with university staff failed to show support for using yoga to increase heart rate variability—which was attributed to the small study sample and compromised statistical power (Cheema et al., 2013). Despite this, Diener et al. (2020) highlighted that effective coping is a direct consequence of positive emotional regulation strategies, which further emphasises the value of positive emotions in workplace settings in that it can offset the consequences of negative emotions. Based on this, it can be argued that workplace well-being interventions targeting affective states may provide valuable cognitive and physiological resources that may fuel more positive perceptions, and help counter physiological fatigue which assists emotional regulation and functioning.

Research also illuminates the spill-over effects between work and personal life and implications for emotional well-being in workplace settings in that enriched experiences at work can increase positive affect. A study by Timms et al. (2015) using a heterogeneous Australian sample ($n = 470$) showed that enriched work experiences provided tangible benefits to employees' family lives and long-term returns to organisations. Also, drawing from the broaden-and-build theory, their findings demonstrated that positive experiences, such as leaving work in a good mood, were associated with long-term work engagement. Although these findings were drawn from a highly educated Western sample, they showed that happiness at work could be an enabler in terms of people's life outside work and return benefits to the workplace through sustained work engagement.

These findings further support the argument of using thriving and employee flourishing as long-term strategies for organisational performance (Spreitzer & Hwang, 2019; Stelzner & Schutte, 2016). When employees leave work in a positive affective state, it may translate to family life, being conducive to building supportive and nurturing relationships, another enduring personal resource conducive to well-being (Fredrickson, 2004). In turn, leaving home in a positive state can also translate to the work environment. Linked to the

interconnection between work and family life, a study by Wang et al. (2020) showed that perceived social support, particularly from family, played a moderating role between emotional exhaustion and subjective well-being among Chinese female doctors. Supportive family relationships can help promote emotional well-being and buffer against emotional exhaustion. When employees leave work in a good mood, it is more conducive to their family life, which serves as an enduring personal resource to be tapped during challenging times (Fredrickson, 2004).

Research related to life satisfaction is considered next. Findings by Alrawadieh et al. (2020) using a sample of tour guides in Jordan ($n = 202$) revealed a positive relationship between quality of work life and life satisfaction. Enhancing personal resources of employees such as cognitive, behavioural, and social skills (for example, positive thinking and lifestyle improvement) is an aspect of workplace support that may enhance the quality of work life (Salanova et al., 2013), which in turn could enhance life satisfaction (Alrawadieh et al., 2020). Similar to positive affect, enhanced life satisfaction benefits employees and the organisation. Straume and Vittersø (2015) indicated that increases in life satisfaction could improve employees' health, which could reduce sick leave. These findings suggest that workplace health promotion programmes aimed at increased life satisfaction could result in positive outcomes for individuals (better health) and organisations (reduced sick leave).

Furthermore, a study by Zhai et al. (2020) revealed that workplace support was positively related to thriving at work and positively associated with life satisfaction. As highlighted by Salanova et al. (2013), employees may regard individual-based interventions as a form of workplace support as it offers benefits across life domains. However, findings by Newman et al. (2015) revealed that types of workplace support impact differently on life satisfaction. In their study, perceived supervisor support was directly related to life satisfaction, while perceived organisational support was related to life satisfaction through its

relationship with job satisfaction (Newman et al., 2015). The findings highlighted here demonstrate that employees' work experiences and perceived support play a role in emotional well-being through their association with life satisfaction. This supports the argument that organisational support in the form of workplace interventions aimed to promote employee well-being could serve as a resource that benefits organisational and personal outcomes.

Some examples of workplace well-being interventions that targeted hedonic dimensions of emotional well-being are highlighted next. De Bruin et al. (2020) demonstrated that emotional well-being dimensions, specifically happiness and affect, were significantly enhanced following a six-week multifaceted workplace programme that combined physical activity, yoga, and mindfulness meditation among employees with self-reported moderate work-related stress symptoms. Scores on the one happiness item and the positive affect PANAS subscale significantly increased at post-test follow-up measures (six weeks, six months, and one year later), while scores on the negative affect subscale decreased significantly. Emotional regulation was also assessed using the Positive Reappraisal and Catastrophising sub-scales of the Cognitive Emotion Regulation Questionnaire. While positive reappraisal significantly increased at post-test and six-week follow-up, catastrophising significantly decreased. This evidence supports the model by Diener et al. (2020) that workplace well-being interventions can serve as emotional regulation strategies that enhance participating employees' state-like and enduring personal resources. For example, this also suggests that evaluating the emotional regulation effects of physical activity, yoga, and mindfulness meditation strategies using self-report measures may provide more significant outcomes than objective measures of heart rate variability (Cheema et al., 2013; Posadzki et al., 2015; Tyagi et al., 2016). The reported study's weakness was that participants were not randomly assigned (de Bruin et al., 2020). Moreover, although the

intervention was multifaceted, it was implemented over a relatively short-term period of six weeks.

Michishita et al. (2017) conducted a randomised control trial exploring the effects of a 10-week active rest intervention among employees practising ten minutes of group exercise comprising warm-up, cognitive functional training, aerobic exercise, resistance training, and cool-down during their lunch break. Scores from the friendliness and vigour-activity items of the Profile of Mood States second edition and support from superiors, colleagues, and family/friends, as well as job satisfaction items from the Brief Job Stress Questionnaire, increased significantly in the intervention group. These scores also demonstrate that workplace interventions serve as an emotional regulation strategy that can promote state-like and enduring personal and social resources. Furthermore, the scores suggest that a lunchtime intervention of as little as ten minutes can uplift affective states and may facilitate the feeling of leaving work in a good mood, which has been shown to have spill-over effects on life outside work and benefit the organisation through sustained work engagement (Timms et al., 2015). These findings also demonstrate that workplace interventions can promote personal resources and enhance a sense of support and job satisfaction (Newman et al., 2015) which could increase the quality of one's work life, which is related to life satisfaction (Alrawadieh et al., 2020). Reported study limitations included the short programme duration and the participants' poor adherence to the exercise. Moreover, these findings cannot be generalised due to the small sample of white-collar workers.

Sianoja et al. (2018) also examined how to enhance recovery during lunch breaks by exploring the within-person effects of lunchtime park walks and relaxation exercises on levels of concentration, strain, and fatigue experienced at the end of a working day. The two intervention activities included a 15-minute park walk (n = 51) or relaxation (n = 46) over ten consecutive working days. Their results showed that employees experienced higher levels of

well-being (measured as afternoon concentration, strain, and fatigue) at the end of a working day on the days when they engaged in lunchtime recovering activities. As a study limitation, the authors mentioned that alternative explanations for the observed changes could not be ruled out, limiting the study's validity as causality could not be established. Moreover, the sample consisted mainly of well-educated females, and the study was conducted in a first-world country, limiting the generalisability of these findings. The intervention was limited to participation in a single activity, park walk or relaxation exercise, and the findings were also not supplemented with any qualitative data. However, the findings demonstrate that engagement in conducive lunchtime activities could benefit emotional well-being with related spill-over effects of leaving work in a better mood (Timms et al., 2015).

Preliminary findings by Winslow et al. (2017) from a study examining the effects of two workplace PPIs that lasted one month yielded no significant results on job-related positive and negative affective well-being. One intervention entailed a gratitude activity, while the other combined a gratitude activity and an activity to increase social connectedness. Insufficient statistical power and short-term duration were highlighted as study limitations and possible reasons for the non-significant findings. Winslow et al. (2017) further explained that mild hedonic discomfort may be caused by well-being interventions but may produce higher eudaimonic well-being in the long term. This finding supports the exploration of longer-term interventions on hedonic well-being outcomes, including activities specifically targeting hedonic dimensions.

The reviewed literature demonstrates the value of hedonic dimensions related to employees' well-being and that these hold promising organisational and individual benefits. If organisations are to support workplace well-being interventions, the institutional benefit will serve as a motivation. Outcomes from workplace intervention studies provide promising evidence that hedonic well-being indicators can be targeted through well-being strategies (De

Bruin et al., 2020; Michishita et al., 2017; Sianoja et al., 2018). However, none of the interventions explored here combined long-term, multifaceted interventions. The value of eudaimonic well-being dimensions in the workplace is explored next.

3.2.2 Positive Functioning: Psychological Well-being and Social Well-being

In comparison to our understanding of hedonic components at work, less is known about eudaimonic well-being in workplace settings or how it is influenced and shaped through work (Der Kinderen & Khapova, 2020; Pătraş et al., 2017). Der Kinderen and Khapova (2020) argued that eudaimonic pursuits in the workplace are important as they contribute towards long-term well-being. In line with this, Rothmann (2013) pointed out that hedonic well-being is not sustainable in the long run in the absence of eudaimonic well-being. This illuminates the importance of targeting both approaches in workplace well-being.

Within organisational research, eudaimonic well-being is frequently defined as context-free, optimal functioning as captured by Ryff's (1989, 2014) psychological well-being dimensions, which include personal growth, meaning or purpose in life, autonomy, self-realisation, the use of strengths, and positive relationships (Der Kinderen & Khapova, 2020; Grant & McGhee, 2020). In their review of 69 studies, der Kinderen and Khapova (2020) found that Ryff's psychological well-being scale and the shortened version of Keyes' mental health continuum were the most frequently used measures of eudaimonic well-being in the workplace. This finding demonstrates the popularity of these measures in organisational contexts.

As highlighted in the introduction section, three important components of overall well-being at work that interact with each other include subjective or hedonic well-being, eudaimonic well-being, and social well-being (Fisher, 2014). It is important to illuminate the interactions between hedonic, eudaimonic, and social components of workplace well-being as there is an interplay between these aspects. The connection between employees' experiences

and perceived support in the workplace exemplifies the interplay between aspects of well-being. The previous section demonstrated that work experiences and perceived support play a role in emotional well-being dimensions (Alrawadieh et al., 2020; Newman et al., 2015; Zhai et al., 2020). In relation to eudaimonic indicators, research by Gillet et al. (2012) demonstrated a significant positive relationship between distal organisational support (the extent to which employees feel their organisation values their contributions and cares about their well-being), basic psychological needs (specifically autonomy, competence, and relatedness), and self-realisation, another dimension of psychological well-being. Their results demonstrated a mediating role of need satisfaction between perceived organisational support and self-realisation. From these results, it can be argued that organisational support and psychological needs are important for self-realisation in the work context and that workplace support could impact eudaimonic well-being dimensions. These findings also speak to those of Zhai et al. (2020), who revealed that workplace support was positively related to thriving at work, which positively related to life satisfaction. These studies demonstrate the interrelated nature of eudaimonic and hedonic dimensions, in this case, through perceived organisational support. These findings also promote the argument that offering individual-based workplace interventions could be regarded as receiving organisational support—which impacts both hedonic and eudaimonic well-being indicators.

Next, the value of work experiences for eudaimonic well-being is further explored. It has been asserted that ethics are intrinsic to eudaimonic well-being, considered as a normative or evaluative construct enabling a person to judge if one is living a good life (Grant & McGhee, 2020). De Cremer and Moore (2020) highlighted that ethical workplace behaviour impacts the intrapersonal, interpersonal, and organisational levels. Ethical workplace behaviour entails virtuous practices that equate to positive organisational practices. Positive practices entail behaviours that are respectful, caring, supportive,

forgiving, inspiring, and meaningful and form the basis for well-being intervention activities (Geue, 2018; Salanova et al., 2013). Positive organisational practices also correspond to the yogic life principles, particularly the yamas, which relate to one's attitude and conduct in relation to others (Desikachar, 1995; Kishida et al., 2018). Janse van Rensburg and Rothmann (2020) operationalised positive organisational practices to include dignity and respect, compassionate support, caring, meaning, inspiration, and forgiveness. They investigated how positive organisational practices relate to job demands and resources, person-environment fit (person-organisation fit and person-job fit) and well-being in three South African HEIs. Their results confirmed that positive organisational practices mattered for academics' experiences of job demands and resources, person-environment fit, and optimal functioning (measured as well-being using the Flourishing-at-Work Scale – Short Form). These results imply that promoting caring and supportive behaviour in the workplace could also benefit organisational functioning and enable employees to handle the various demands of their jobs better, serving as a supportive resource.

The ability to manage behaviours and emotions in the workplace also holds multiple implications for well-being. The role of emotional regulation on hedonic well-being has been highlighted previously (De Longis et al., 2020), but behavioural self-regulation also has implications for eudaimonic well-being dimensions. De Cremer and Moore's (2020) review highlighted studies that people's ability to exercise the required self-control to avoid tempting self-serving opportunities—opposing behaviour supporting positive organisational practices—diminishes when self-regulatory resources are depleted. This finding is in line with the notion highlighted by De Longis et al. (2020) and Gailliot et al. (2007), demonstrating the link between self-regulatory resources required for effective emotional regulation. Employees' ethical behaviour shapes the organisational climate (Gondlekar & Kamat, 2016). Therefore, providing personal resources to assist with self-regulation could

promote a more positive work environment. Individual-based well-being interventions, including physical activity, yoga, relaxation, and meditation, could help replenish depleted resources (Michishita et al., 2017; Sianoja et al., 2018). This replenishment may diminish the emotional regulation and self-control required to uphold ethical behaviour and emotional responses conducive to a positive organisational climate.

Geue (2018) found that a positive climate could lead to a positive work environment contributing to employee well-being and flourishing. Results from a cross-sectional study in a restaurant setting ($n = 144$) demonstrated a moderately strong and significant relationship between positive practices and social climate (Geue, 2018). Research by Gondlekar and Kamat (2016) also indicated a significant positive relationship between organisational climate and psychological well-being. Behaviours and practices with compassion, understanding, support, and care are conducive to a positive work environment and form the basis of workplace well-being interventions. Therefore, encouraging ethical behaviour or positive practices through well-being interventions among employees could benefit the organisational climate and psychological well-being.

Promoting psychological well-being in the workplace could also serve as a protective resource against threats to well-being, particularly stress and burnout. The presence of psychological well-being among a sample of Black South African school teachers ($n = 562$) was shown to have a strong inverse relationship with stress (Vazi et al., 2013). Furthermore, relatedness and co-worker relations are associated with psychological well-being at work (Rothmann, 2013), which could also buffer the effects of stress. Investigating the potential impact of work role stress on subjective well-being, Monnot and Beehr (2014) supported the protective value of social support as they had a large positive effect on subjective well-being in their study. Based on this finding, it could be argued that the promotion of both

psychological and social well-being at work may indirectly serve as a protective resource against stress.

Workplace wellness interventions may serve both psychological and social well-being indicators and produce spill over effects between work and personal spheres of life. Some examples of workplace interventions specifically targeting aspects of eudaimonic well-being demonstrate how these dimensions have been impacted through different means. Group presentation of individual-based interventions seems conducive to enhancing employee relationships. For example, Michishita et al. (2017) suggest that performance of group exercise during lunch breaks may be useful for improving relationships among workers, particularly those related to interpersonal stress and support from supervisors, colleagues, as well as family and friends (sub-scales measured with the Brief Job Stress Questionnaire). However, the study by Winslow et al. (2017) that used gratitude and increased social connectedness activities failed to produce significant increases in the eudaimonic measures of gratitude and social connectedness (measured by three items from the Gratitude Adjective Checklist and four items selected from the Social Connectedness scale). Page and Vella-Brodick (2013) also offered evidence that a workplace PPI applying appreciative inquiry to teach strength-based wellness concepts significantly improved psychological well-being measured with Ryff's Scales of Psychological Well-being. Interestingly, no significant impact was observed for work-related well-being measures using The Workplace Well-being Index. The authors concluded that the programme impacted general well-being more than work-specific well-being. This finding was further supported by participants' reports that activity changes outside work improved their general well-being, improving how they felt in the work context (Page & Vella-Brodick, 2013). This finding also supports the preference observed in organisational research to define eudaimonic well-being as context-free, optimal functioning (Der Kinderen & Khapova, 2020; Grant & McGhee, 2020).

Findings from both these studies suggest that individual-based interventions offered in a group format can positively affect general well-being and work-related well-being, along with providing spill-over effects between work and personal life (Michishita et al., 2017; Page & Vella-Brodrick, 2013). These interventions were implemented on a shorter-term basis of six (Page & Vella-Brodrick, 2013) to ten weeks (Michishita et al., 2017). Neither programme combined the use of physical and theoretical components to target well-being.

The literature discussed in the sections on emotional well-being and positive functioning demonstrates the role of these dimensions in the case of various individual and organisational outcomes and the interrelatedness of emotional, psychological, and social well-being dimensions in work contexts. In line with Rothmann's (2013) argument, exploring well-being as a multidimensional construct using Keyes' mental health continuum is well justified. However, a longer-term multifaceted well-being programme combining physical and theoretical components to enhance well-being could contribute to the existing body of knowledge. Work engagement as a well-being dimension and its relation to organisational outcomes are explored next.

3.2.3 *Work Engagement*

Enhancing and sustaining work engagement is of interest to organisations because engagement is associated with employee well-being and work performance (Knight et al., 2017). Moreover, organisations' success and sustainability mainly depend on their employees' productiveness (Ouweneel et al., 2013). If employers are to be encouraged to promote workplace well-being interventions that require employees to take time off their official work duties, a beneficial return on organisational outcomes would be necessary to justify these initiatives during work hours. Work engagement is intricately linked to workplace wellness (Kumar et al., 2020). It has been regarded as an indicator of employee well-being (Salanova et al., 2013) and linked to other organisational benefits such as organisational commitment

(Geldenhuis et al., 2014; Kim et al., 2017). The following discussion on work engagement commences with a description of the concept followed by research highlighting its relationship to employee well-being (both hedonic and eudaimonic dimensions) and organisational commitment. Next, some predictors of work engagement are explored, and research on interventions and work engagement is discussed to highlight how work engagement has been influenced through well-being activities.

Work engagement has been described as a consistent psychological state that leads to better performance (Geue, 2018), an organisational outcome contributing to enterprise success. It comprises three interrelated dimensions, vigour, dedication, and absorption (Schaufeli & Bakker, 2003), and is commonly measured with the Utrecht Work Engagement Scale (UWES) (Grant & McGhee, 2020; Knight et al., 2017). Bakker and Oerlemans (2011) explained that the vigour component is characterised by high energy levels and mental resilience while working. Dedication entails involvement in one's work while experiencing a sense of enthusiasm and significance, whereas the absorption component is characterised by being happily engrossed and entirely concentrated on one's work.

Interestingly, work engagement has been considered a hedonic and eudaimonic component of workplace well-being (Grant & McGhee, 2020). Der Kinderen and Khapova (2020) considered work engagement focusing primarily on affective, work-related attitudes and behaviours to achieve work. In that sense, they regarded it as less related to eudaimonic well-being—which is concerned with functioning or living well. However, Grant and McGhee (2020) pointed out that the UWES is commonly used to measure eudaimonic well-being at work. In line with this, Rothmann (2013) considered work engagement as a dimension of psychological well-being (a eudaimonic component) through the dimensions of vitality and dedication. Despite the different views on whether work engagement is

characteristically hedonic or eudaimonic, it plays an important role in employee well-being, performance, and organisational commitment (Field & Buitendach, 2011; Kim et al., 2017).

Kumar et al. (2020) investigated the relationship between employee wellness and work engagement in a South African parastatal organisation using a random probability sample (n = 134). They found a significant direct positive relationship between employee wellness (including six dimensions: an emotional, psychological, social, spiritual, physical, and intellectual dimension) and work engagement measured using the UWES. These findings highlight the link between employees' well-being and work engagement and point to evidence that various well-being dimensions are associated with work engagement. However, no conclusions on causal relationships were drawn (Kumar et al., 2020).

Further support for the link between well-being and work engagement comes from Field and Buitendach (2011) using a nonprobability convenience sample (n = 123) of support staff in a South African tertiary education institution. They also found significant relationships between work engagement and well-being indicators, both hedonic (measured with The Satisfaction with Life Scale) and eudaimonic (measured with The Well-Being Questionnaire) dimensions. Greater significance was found in the case of the eudaimonic dimension. These authors found little research directly investigating well-being as a predictor of work engagement (Field & Buitendach, 2011). Still, their findings demonstrated a significant positive relationship between well-being and work engagement and the predictive value of both well-being and work engagement for organisational commitment, respectively. Well-being did not show predictive value for work engagement, but it did so for organisational commitment. The analysis revealed that work engagement had the most significant predictive value for organisational commitment. Kumar et al. (2020) argued that well-being might promote work engagement. Existing research shows the value of both well-being and work engagement on the outcome of organisational commitment—although it is

not yet empirically clear if work engagement precedes organisational commitment or vice versa (Kim et al., 2017). Barkhuizen et al. (2013) provided evidence that work engagement is related to organisational commitment in a study that investigated the effects of dispositional optimism on job resources, burnout, work engagement, ill health and organisational commitment of South African academic staff (n = 595) in HEIs. Furthermore, the results demonstrated that job resources (including supervisor relations, role clarity, and task characteristics) contributed to work engagement.

Research also suggests that employee behaviour and conduct relate to work engagement. Geue (2018) found a significant relationship between positive practices representing virtuous behaviour and work engagement in a sample from the restaurant industry (n = 144). These results might also apply to other service industries and perhaps even HEIs where various administration services and teaching are provided to students. Positive practices entail behaviours such as caring, compassion, and support that relate to eudaimonic well-being dimensions, which help promote positive workplace climates, which could, in turn, promote employee well-being and work engagement (Geue, 2018; Gondlekar & Kamat, 2016). As mentioned previously, these positive practices form the basis of well-being intervention activities and also characterise the yama yogic principles (Desikachar, 1995; Kishida et al., 2018; Salanova et al., 2013). Using well-being interventions to encourage these types of behaviours in the workplace may enhance the organisational climate, which is beneficial for promoting eudaimonic well-being and work engagement.

As demonstrated with hedonic and eudaimonic dimensions, spill-over effects of well-being can also impact work engagement. Timms et al. (2015) assessed the role played by work-family enrichment as a direct antecedent of work engagement. One of their key findings was that positive experiences, such as leaving work in a good mood, were associated with long-term work engagement. This points to the value of hedonic well-being in work

engagement. However, their cross-sectional analysis revealed a negative relationship between absorption (one dimension of work engagement) and family-work affect (described as positive mood gains from family impacting the work domain). They explained that absorption in work combined with a heavy workload might inhibit people's ability to switch off, recover from work, and be psychologically present for other important aspects of their lives (Timms et al., 2015). This impediment may put people at risk of burnout. Continuous absorption in one's work and the inability to switch off and recover from work would also deplete the resources required for effective emotional regulation (Gailliot et al., 2007), which could, in turn, lead the person to spiral into a state of feeling emotionally low and depleted (De Longis et al., 2020). As suggested by De Longis et al. (2020), physical exercise, yoga, and meditation are strategies that can serve as personal resources to help employees combat work fatigue, manage stress, and better regulate emotional states, which is further supported by findings from Kobylńska et al. (2018) and Menezes et al. (2015). This could contribute to employees leaving work in a better mood, which could contribute to greater work engagement (Timms et al., 2015) and assist them in detaching from work responsibilities after hours.

Kumar et al. (2020) also explored job demands as a mediator between employee wellness and work engagement. The subscales growth opportunities and organisational support from the Job Demands-Resource Scale had a large effect on work engagement, while no significant correlation between work overload and engagement was observed. These findings imply that positive aspects, such as opportunities for growth and organisational support—which could be provided through well-being interventions—are greater predictors of work engagement than negative aspects, such as work overload. In line with these findings, Rothmann (2013) summarised South African and Namibian research and concluded that the more job resources available, the greater the likelihood of employee engagement.

Barkhuizen et al. (2013) also found that job resources (role clarity, supervisor support, and task characteristics variety and/or learning opportunities) contributed to work engagement among academics in South African HEIs (n = 595). Spreitzer and Hwang (2019) highlighted that the job resource of autonomy had been related to more vigour at work, one component of work engagement.

Research suggests that job resources promote work engagement and could potentially buffer the negative effects of work overload on work engagement (Barkhuizen et al., 2013; Kumar et al., 2020; Rothmann, 2013). However, job resources have been described in terms of social support from colleagues and superiors, job control, task variety, and learning and training opportunities (Barkhuizen et al., 2013; Rothmann, 2013; Spreitzer & Hwang, 2019). These resources are mainly linked to organisational factors and not under the direct control of the employees, signifying top-down resources. Offering well-being interventions that promote a more positive outlook enhances social support, buffers the effects of stress, and replenishes physical, mental and emotional resources required to function optimally. Such interventions could serve as a bottom-up job resource in greater reach of employees. Individual-based well-being interventions focus on personal aspects and may be regarded as workplace resources that support personal growth and development. Such resources could entail positive self-evaluation or belief in employees' control over their environment (Pérez-Fuentes et al., 2019). When organisational support with top-down job resources is lacking, resources gained from well-being interventions could offer bottom-up resources that may benefit work engagement. Based on this reasoning, it can be argued that workplace well-being interventions may serve as a personal resource which could promote greater work engagement.

Work engagement has been proposed as a suitable well-being construct in testing the effects of workplace interventions as it is both cognitive and affective—similar to general

well-being. It is regarded as an active measure of well-being, unlike passive measures, such as job satisfaction, which is characterised by satiation (Ouweneel et al., 2013). Instead, it has been argued that engaged employees are activated towards behaving positively and performing better (Hence et al., 2008, as cited in Ouweneel et al., 2013). A systematic review by Knight et al. (2017), which explored the effectiveness of interventions on work engagement, suggested that interventions aimed at increasing resources in the workplace and enhancing well-being can improve employees' work engagement—including personal resource-building and health-promoting interventions that focus on increasing employees' self-perceived positive attributes and strengths, encouraging the adoption and sustainment of healthier lifestyles, and reducing and managing stress. Moreover, this effect was observed across a range of countries, participant characteristics, industries, and organisational settings, which suggested generalisability and, thus, the benefit of work engagement interventions to organisations globally (Knight et al., 2017).

However, despite the favourable evidence offered by Knight et al. (2017), three studies reviewed here indicated that the effects of workplace wellness interventions on work engagement are inconclusive (Keeman et al., 2017; Ouweneel et al., 2013; Strijk et al., 2013). It has been argued that enhanced well-being relates to positive organisational attitudes such as less intention to leave, more positive employee relationships, and higher work engagement. Therefore, Keeman et al. hypothesised that employees ($n = 52$) participating in an online Wellness Game designed to enhance attitudes and behaviours conducive to well-being over one month would show greater work engagement (Keeman et al., 2017). However, their results did not support the hypothesis. The small sample size and the consequent limited statistical robustness were highlighted as possible reasons. Another study limitation was the small sample size and the high attrition rate. Of the 157 employees who completed the pre-assessment, only 52 completed the post-game survey. Moreover, because

the design did not include a control group, no comparison could be made between those who participated in the intervention and those who did not.

In line with this, Ouweneel et al. (2013) investigated the effects of an eight-week online PPI on work engagement, as well as positive emotions and self-efficacy as personal resources to predict engagement. The intervention required participants ($n = 86$) to complete various assignments designed to enhance well-being, categorised as happiness assignments, goal-setting assignments, and resource-building assignments. Pre- and post-intervention measures were conducted with an intervention and control group. They hypothesised that participation in the self-enhancement intervention would significantly increase work engagement measured with the UWES compared to control group participants. Although the self-enhancement group did not show significant increases in work engagement compared to the control group, an additional analysis was done to address the limitations of the selection effects of the self-selected sample. The additional analysis revealed that the positive effects of the intervention were present for participants with low work engagement but not for those with medium or high work engagement. This study also reported a high attrition rate which was noted as a research limitation. The authors highlighted a lack of support from supervisors and colleagues to participate in the intervention as a possible reason for the high attrition. The additional analysis informed their suggestion that workplace PPIs should target employees low in work engagement as they have more unused potential and therefore have more to gain (Ouweneel et al., 2013).

Strijk et al. (2013) evaluated the impact of a worksite lifestyle intervention to improve lifestyle behaviours on work engagement, productivity, vitality, and sick leave using a randomised control trial design ($n = 730$). The six-month intervention entailed multiple components targeting both mental and physical aspects of vitality. It included Hatha yoga relaxation exercises (focusing on breathing and meditation), aerobic workouts, individual

lifestyle coaching sessions, and access to free fruit. The study focused on older workers aged 45, and above, and intervention activities were offered at a nearby off-site location during lunchtime and after work. The outcomes indicated no significant differences between the intervention and control group participants after six or 12 months. Lower than expected attendance and compliance rates were highlighted as study limitations and possible reasons for the non-significant results, as well as the fact that participants included a relatively healthy group of workers. Other noteworthy study limitations included gathering data solely through self-reported questionnaires with the potential for social desirability bias, low external validity, and poor follow-up rates compromising the robustness of the analysis (Strijk et al., 2013).

Although there is evidence to support that enhancing employees' personal resources through individual-based workplace well-being interventions can benefit work engagement (Knight et al., 2017), the success of such interventions depends on various factors. Attrition rate and participation in intervention activities have important implications for the effects of well-being interventions on work engagement (Keeman et al., 2017; Ouweneel et al., 2013; Strijk et al., 2013). The studies by Keeman et al. (2017) and Ouweneel et al. (2013) utilised online interventions, both impacted by high attrition rates, suggesting that face-to-face interaction might assist participant motivation. The study by Strijk et al. (2013) further suggested that on-site access to intervention activities during working hours could further boost participation and compliance. These suggestions also illuminate the important role of institutional buy-in and support from management to encourage employee participation in wellness activities and to promote potential benefits to employees, especially those low in work engagement (Ouweneel et al., 2013; Strijk et al., 2013).

The reviewed literature in this section also demonstrated the link between hedonic and eudaimonic well-being dimensions and work engagement (Field & Buitendach, 2011; Kumar

et al., 2020). The literature informs the argument that promoting well-being-related aspects and behaviour employing workplace wellness activities such as positive emotions (Timms et al., 2015) and virtuous behaviour (Geue, 2018) could benefit the social climate and organisational commitment as higher level positive outcomes (Field & Buitendach, 2011). Strijk et al. (2013) highlighted lack of time as a hindrance factor that negatively impacted participant involvement in their study. They recommended that employees are allowed time during working hours to engage in wellness programmes. In line with this, Bretland and Thorsteinsson (2015) stated that institutional support and encouragement are likely to enhance the effects of wellness interventions, promote employee involvement and motivation, and provide social opportunities for employee interactions. Such benefits are useful to motivate institutions to support and encourage employees to participate in workplace well-being programmes.

Now that the (positive) indicators for high well-being have been discussed in-depth, the (negative) indicator of low well-being, perceived stress, in relation to workplace wellness will be explored, particularly in the context of HEIs.

3.2.4 *Perceived Stress*

Symptoms of chronic stress, associated problems of burnout, and mental health issues such as anxiety and depression among the workforce are of increasing interest to employers. These conditions negatively impact work performance and productivity, lead to increased absenteeism and staff turnover, and contribute to high healthcare and disability costs (Barkhuizen et al., 2013; Bateman, 2015; Fordjour et al., 2020; Vyas-Doorgapersad & Surujlal, 2015). Perceived stress serves as a (negative) indicator of low well-being in this study as it plays a pre-emptive role in the onset of burnout, which may result from the unsuccessful management of chronic work stress (WHO, 2019). Thus, it can be argued that targeting the concept of perceived stress fits more appropriately with a proactive approach to

workplace well-being. This section describes the concept of perceived stress, and the link to burnout and other negative consequences is highlighted. Stress in the context of HEIs is discussed, and particular contributors to employees' stress in this setting are illuminated. Negative consequences of stress on well-being indicators are mentioned, and research demonstrating the use of well-being interventions to target stress is explored.

Stress is an integral, unavoidable, and necessary part of life (Poalses & Bezuidenhout, 2018; Vinay et al., 2016). Life stressors do not automatically lead to negative consequences (Straume & Vittersø, 2015). Only excessive and unmanaged stressors pose a threat to well-being, which could cause or exacerbate many, if not all, psychological and physiological health issues (Fricchione, 2014).

Psychological or perceived stress results from the experience or cognitive appraisal that one cannot cope with life's psychological or physical demands (Magalhaes Das Neves et al., 2014). In the workplace, various factors, including limited resources, high workloads, and a lack of exercise and work-life balance can contribute to stress (Bezuidenhout & Cilliers, 2010; Fordjour et al., 2020; Poalses & Bezuidenhout, 2018). The ramifications of the recent COVID-19 pandemic added additional stressors unique to the restrictions and limitations that resulted from the lockdowns and the worry of falling ill or losing loved ones (Motala & Menon, 2020). Some believe that the pandemic will only intensify social and economic challenges and increase the risk of mental health issues in the future (Naidu, 2020).

Continuous exposure to stress can adversely affect overall health and well-being (Vinay et al., 2016), and it is also one possible precursor to burnout (Pérez-Fuentes et al., 2019).

Burnout has been described as a chronic state of work stress in which employer expectations and employee workload exceed the individual's perceived psychological ability to cope with their expected work demands (Bretland & Thorsteinsson, 2015). Burnout is a risk factor that can compromise well-being (Wang et al., 2020).

Job demands require physical, cognitive and emotional effort (Poalses & Bezuidenhout, 2018). When job demands are high and employees do not get enough time to recover from meeting the required demands, these can become job stressors. Humans have a finite amount of mental energy for exerting self-control (Gailliot et al., 2007), and when depleted, this leads to exhaustion or the feeling of being run down. When prolonged, this may lead to burnout. Pătraş et al. (2017) explained that exhaustion is a central feature of burnout, which refers to a lack of energy and emotional resources that result from workplace stressors. Feelings of exhaustion and burnout would negatively affect employees' emotional states (De Longis & Alessandri, 2020). Moreover, exhaustion can easily occur in service-related industries such as HEIs where employees deal with student demands (Pătraş et al., 2017). If stress symptoms are not contained or managed effectively, work can become unpleasant and even meaningful work could be experienced as unfulfilling and meaningless, negatively affecting psychological well-being (Bezuidenhout & Cilliers, 2010). Providing employees with an opportunity and appropriate resources to replenish energy spent on work demands during the day could prevent exhaustion and subsequent burnout.

Academics and administrative staff in HEIs have been experiencing a range of difficulties in fulfilling their work duties over the years which contribute to high stress levels in this population (Bezuidenhout & Cilliers, 2010; Poalses & Bezuidenhout, 2018; Watts & Robertson, 2011). For academics, these include decreasing resources to get work done, with ever-increasing demands by faculties, students, and sometimes parents. Increasing demands may take various forms, such as escalating administrative duties, increased expectations for research outputs, increasing lecturer-student ratios, and exhausting interpersonal relationships with students (Bezuidenhout & Cilliers, 2010). A review by Watts and Robertson (2011) also revealed that exposure to high numbers of students strongly predicted the experience of burnout, and time pressure was also identified as a potential stressor among academic

teaching staff, albeit to a lesser degree. Although their results were inconclusive, Watts and Robertson (2011) illuminated the relationship between social interaction and burnout among university staff. Burnout could negatively impact social interactions as people feel emotionally exhausted and consequently more depersonalised in social engagements. Social support could serve as a protective factor against burnout, pointing to the value of enhancing social well-being indicators to buffer against workplace stress' detrimental effects (Bezuidenhout & Cilliers, 2010).

Poalses and Bezuidenhout (2018) explored academic and administrative staff members' experience of work stress within a mega open distance learning university in the South African context. Their results revealed that both academic and administrative staff experienced high levels of overload. The academic staff reportedly carried a heavier burden and experienced higher levels of job insecurity, while administrative staff reported higher stress levels due to insufficient growth opportunities. The findings also revealed that staff felt they had little control over many aspects of their jobs (autonomy) and had little or no control over their performance targets. Employees who experience little control are inclined to experience higher stress levels and may be less committed to their work (Poalses & Bezuidenhout, 2018). This was also alluded to by Spreitzer and Hwang (2019), who highlighted that the job resource of autonomy is related to more vigour at work, a component of work engagement. Moreover, insufficient growth opportunities could also negatively impact work engagement (Kumar et al., 2020).

The importance of strategies to help reduce employees' perceived stress and how this can be accomplished by promoting strengths-based resources, as discussed next. Similar to how positive well-being has spill-over effects between work and personal life domains, work and life stress also affect the different spheres of life. Hence, promoting employees' personal resources to help manage the effects of stress is worthwhile for organisations as it can

promote better functioning at work (Timms et al., 2015). Individuals' responses and abilities to cope with stress vary depending on personality, life experiences, psychological and physiological states, lifestyle choices, and habits (Marx, 2017; Poalses & Bezuidenhout, 2018). Psychological resources such as optimism and the ability to make sense of one's experiences, believing that resources are available to meet demands, and finding meaning in one's work or experiences have been shown to serve as protective resources against work stress. These resources could, in turn, promote well-being and work performance, including work engagement (Barkhuizen et al., 2013; Donaldson et al., 2015; Field & Buitendach, 2011; Wang et al., 2017). Dispositional optimism is one such resource defined as the general expectation that good outcomes will occur across various life domains (Barkhuizen et al., 2013). It has also been suggested that enhancing positive psychological resources through workplace intervention strategies is a way to protect the psychological health of employees against the detrimental effects of work stress (Wang et al., 2017). Previous research has revealed that psychological disorders can have adverse consequences on employees' physical, mental and social well-being, which further warrants the necessity of promoting employee's resources to manage stress before it leads to psychological health issues (Fordjour et al., 2020).

Employees do not always have direct control of all factors contributing to stress and burnout, for example, time pressure and a sense of autonomy at work. However, a review by Fordjour et al. (2020) also identified various personal factors that serve as predictors of employees' psychological stress related to the individual. These factors included lifestyle habits and choices such as lack of exercise, poor eating habits, poor sleeping patterns and general health, among others; all of which the individual can control. Enhancing personal resilience and building other protective factors to guard against the effects of stress have been identified as key focus areas in promoting a mentally healthy workplace (Harvey et al.,

2014). These protective factors are in line with proactive and strengths-based approaches to workplace wellness which, according to Van den Bergh (2000), are more salient for today's diverse employee needs, moving the focus away from "troubled employees". She argued that increased emphasis on holistic health, wellness, and spirituality calls for rethinking workplace wellness approaches, moving from pathology to building and nurturing strengths (Van den Bergh, 2000). Existing evidence demonstrates that staff in HEIs are affected to the same extent as in other professions by the detrimental effects of stress and burnout on their well-being and overall work performance, which makes HEIs a suitable context for well-being interventions (Barkhuizen et al., 2013; Bezuidenhout & Cilliers, 2010; Poalses & Bezuidenhout, 2018).

Research related to workplace wellness interventions, with specific reference to indicators of stress and related issues, is explored next. A review by Chu et al. (2014) concluded that both workplace yoga programmes and other physical activity were associated with significant reductions in anxiety and depressive symptoms. However, the impact in terms of stress relief was less conclusive. Shonin et al. (2014) conducted a randomised controlled trial to assess the effects of an eight-week meditation intervention on outcomes related to workplace well-being. Participants comprised office-based middle managers ($n = 152$). The intervention group ($n = 68$) demonstrated significant and sustainable improvements in work-related stress (measured with the Work-Related Stress Indicator Tool) and psychological distress (measured with the Depression, Anxiety, and Stress Scale). These authors concluded that meditation could effectuate a perceptual shift in how employees experience work and the psychological environment and can be used as a cost-effective workplace well-being intervention (Shonin et al., 2014). One study limitation was that the sample likely entailed employees interested in learning meditation (due to pre-intervention taster sessions), limiting the external validity of the research. However, willingness to change

and self-selected samples have important implications for study attrition and adherence in well-being intervention research (Keeman et al., 2017; Ouweneel et al., 2013; Strijk et al., 2013). No positive well-being indicators were measured in this study. Work-related well-being was explored in terms of work stress, depression, and anxiety (Shonin et al., 2014).

The six-week multicomponent intervention by de Bruin et al. (2020) discussed in relation to emotional well-being targeted work-related stress complaints from a body-mind perspective to explore effects on personal goals, well-being (stress, anxiety, depression, sleep, affect, happiness), functioning at work (dropout, mental and physical workability, work satisfaction), and training specific aspects (mindful awareness, self-compassion, emotion regulation strategies). Participants ($n = 98$) included employees who experienced at least moderate work-related stress symptoms. Study results showed long-lasting improvements lasting up to one year. Large effects were found on stress and risk for dropout from work and personal goals related to both work and private life. These findings support using workplace yoga interventions to promote well-being dimensions and reduce stress and symptoms of anxiety and depression. It also suggests that intervention effects could potentially target spill-over effects of stress between work and life domains. The multifaceted intervention approach, offering the programme during working hours, and the self-selected sample of participants who experienced stress, are likely design factors that contributed to the positive outcomes (Ouweneel et al., 2013; Strijk et al., 2013).

The intervention studies highlighted above provide promising evidence that workplace wellness initiatives can be used to target employees' perceptions of stress. However, outcomes from the review by Chu et al. (2014) indicated that more evidence is needed to explore the impact of physical activity on employee stress relief. Moreover, the study by Shonin et al. (2014) indicated that meditation could potentially affect employee stress. Their study was one-faceted, explored only meditation and negative well-being

indicators, and the investigation was limited to a sample of middle management. Findings by de Bruin et al. (2020) provide promising evidence for using multifaceted interventions in the workplace. Their sample included participants that showed moderate work-related stress symptoms, which may have had significant effects, as these participants arguably had more potential to benefit from stress relief (Ouweneel et al., 2013).

Various workplace wellness interventions have been shown to have a range of positive outcomes on employees' well-being that benefits individuals and enterprises alike. The next section further explores workplace well-being intervention research with particular reference to methodological aspects.

3.2.5 Well-Being Intervention in the Workplace

Designing and testing programmes that can reliably and sustainably enhance employee well-being has been identified as a key area for future research (Page & Vella-Brodick, 2013). In this section, research on PPI studies in workplace settings is discussed with reference to settings, context, and population, types of interventions used and mode of delivery, as well as important aspects related to the research design that needs to be considered in evaluating these studies. Intervention duration, session frequency and length, delivery method/type, well-being dimensions targeted, and outcome variables have all been identified as moderators that influence the effectiveness of interventions (Donaldson et al., 2019; Koydemir et al., 2020). These aspects are considered in the discussion to inform and justify the current study's research design and programme implementation strategies.

Regarding context and population, most of the studies discussed were conducted with WEIRD samples, except the Japanese study by Michishita et al. (2017). A systematic review and meta-analysis by Donaldson et al. (2019) evaluating PPIs in work contexts also included studies mainly conducted in Westernised developed countries with high earning and educated samples. Of the 22 studies included in the review, seven were in educational contexts from

countries including the United States, Germany, Netherlands, Australia, and China (only one). The study by de Bruin et al. (2020) utilised a self-selected sample with the inclusion criteria of self-reported suffering from moderate work-related stress. Strijk et al. (2013) specifically targeted hospital staff aged 45 years and older. However, healthy adult samples are commonly used in well-being intervention studies conducted in work settings where all employees are invited to participate (Edries et al., 2013; Ouweneel et al., 2013; Sianoja et al., 2018; Strijk et al., 2013; Winslow et al., 2017). It is also common for samples to comprise a majority of female participants (de Bruin et al., 2020; Sianoja et al., 2018; Winslow et al., 2017). Due to ethical requirements inherent in conducting social science research, participants of intervention studies characteristically comprise people who willingly volunteer. Based on that, it can be argued that all samples are essentially self-selected in that participants choose to be involved. Readiness and willingness for change are essential aspects of self-development endeavours and endorse using self-selected samples in PPI studies (Lyubomirsky et al., 2011; Ouweneel et al., 2013).

Although a wealth of research focuses on using interventions to promote well-being indicators, not all studies explicitly defined the interventions used as PPI (Koydemir et al., 2020). This also holds true for some of the workplace well-being intervention studies discussed in the preceding sections (de Bruin et al., 2020; Keeman et al., 2017; Michishita et al., 2017; Shonin et al., 2014; Sianoja et al., 2018; Strijk et al., 2013). However, it can be argued that any intervention that entails activities or practices designed to promote positive thoughts, behaviours, or emotions that enhance aspects related to well-being can be regarded as PPI (Koydemir et al., 2020). Although Hendriks et al. (2019) indicated that there had been a sharp rise in multicomponent PPI in recent years, their review did not target interventions conducted specifically in workplace contexts. Few of the workplace well-being studies reviewed in the preceding sections utilised multifaceted interventions (de Bruin et al., 2020;

Edries et al., 2013; Strijk et al., 2013) and a few explored aspects of yoga (Chu et al., 2014; de Bruin et al., 2020; Strijk et al., 2013). Moreover, the studies that included yoga (de Bruin et al., 2020; Strijk et al., 2013) only utilised physical, mindfulness, and relaxation tools of Hatha yoga but did not draw on the ethical yogic principles that more specifically target the eudaimonic well-being dimensions.

Concerning intervention duration, Chu et al.'s (2014) review revealed a need for more studies exploring longer-term interventions, particularly with a physical component. Not many studies explored interventions lasting longer than six months (Chu et al., 2014; Strijk et al., 2013). A meta-regression by Koydemir et al. (2020) supports that longer interventions might have stronger effects, while the length of the sessions might not have a significant impact (Michishita et al., 2017). However, programme adherence and high attrition have been highlighted as limitations in workplace well-being studies (Michishita et al., 2017; Ouweneel et al., 2013; Strijk et al., 2013). When exploring interventions of longer duration these issues may pose an additional challenge if not properly addressed. Self-selection into interventions, on-site access, and organisational support encouraging employees' participation in well-being activities were highlighted as significant aspects that could address these challenges (Ouweneel et al., 2013; Strijk et al., 2013). In PPI studies, adherence to intervention activities moderates desirable outcomes (Miglianico et al., 2019; Strijk et al., 2013). A suitable study site, willing participants, and programme implementation strategies are critical aspects to consider in workplace PPI research that could encourage participant commitment to intervention activities.

With regards to the mode of implementation—through the use of technology (online) or employing traditional face-to-face methods—Koydemir et al. (2020) found that interventions using face-to-face implementation may have a greater impact than those using technology. This finding is in line with the outcomes of workplace well-being studies by

Ouweneel et al. (2013) and Winslow et al. (2017), that used online methods to implement the interventions. Although Donaldson et al. (2019) did not demonstrate that the use of online interventions had less significant effects, their findings showed that group interventions had a medium effect on improving desirable outcomes. In contrast, individual and online interventions only had a small effect. This finding supports implementing individual-based PPI in a group format using in-person facilitators. Hendriks et al. (2019) also highlighted the importance of the relationship between the intervention trainer and study participants and how it contributes to the efficacy of the intervention. This outcome is further echoed by Miglianico et al. (2019, p. 757), who highlighted that “the attitude of the person conducting the intervention seems to impact the consequences of the intervention”.

Donaldson et al. (2019) highlighted that measuring both desirable and undesirable outcomes related to workplace PPI is in line with the framework used for human resource managers in most workplace situations. This framework justifies the selection of positive high and negative low well-being dimensions selected for the current study. De Bruin et al. (2020) and Strijk et al. (2013) also explored desirable and undesirable outcomes in two multifaceted studies. De Bruin et al. (2020) assessed intervention effects on personal goals, well-being (considered as comprising stress, anxiety, depression, sleep, affect, and happiness), functioning at work (considered as comprising dropout, mental and physical workability, work satisfaction), and training specific aspects (including mindful awareness, self-compassion, and emotion regulation strategies). Strijk et al. (2013) collected work-related and general vitality, work engagement, productivity, and sick leave data. Interestingly, the meta-analysis by Donaldson et al. (2019) revealed that the impact of PPIs on undesirable work outcomes was slightly higher than the effects on desirable outcomes. Based on that, they proclaimed that using PPIs in work contexts might be more effective in reducing undesirable outcomes.

Repeated measures are commonly used to determine intervention effects considering the various research designs utilised in intervention studies, with various post-intervention follow-ups with intervals ranging from six months to one year (de Bruin et al., 2020; Page & Vella-Brodrick, 2013; Strijk et al., 2013). Moreover, the value of mixed methods studies is that it allows the opportunity to obtain qualitative data that could be used to supplement quantitative findings and inform a richer understanding of intervention strengths and challenges experienced by participants. However, few mixed methods studies were identified (de Bruin et al., 2020; Page & Vella-Brodrick, 2013). In the mixed methods studies, valuable information related to effects on well-being and skills/insights acquired from the programme were revealed through qualitative data, which helped to explain the quantitative data further (de Bruin et al., 2020; Page & Vella-Brodrick, 2013). Additional qualitative information becomes particularly valuable in cases where findings are not statistically significant, as qualitative data could reveal valuable insights based on participants' experiences (Winslow et al., 2017).

An example of a multifaceted workplace wellness study conducted in the South African context comes from Edries et al. (2013). They investigated the impact of a six-week employee wellness programme informed by the principles of cognitive behavioural therapy. The intervention entailed weekly health promotion talks combined with supervised aerobic exercise classes among employees of three clothing manufacturing companies. The study evaluated short-term effects of the programme on health-related quality of life, health behaviour change, body mass index, and absenteeism measured at baseline and six weeks after the initiation of the intervention using a randomised control trial design. No post-test follow-up was assessed to determine the sustained effects of the intervention. Post-intervention scores of the experimental group showed improvements in health-related quality of life, reduced body mass index, and an overall decrease in time off work. However, the

differences were not statistically significant. The authors attributed the lack of significant differences to the short-term duration of the intervention. However, a six-week intervention by Page and Vella-Brodrick (2013) showed significant increases in subjective and psychological well-being. It could be that the aspects measured by Edries et al. (2013), such as behavioural health change, require more time to show significant effects. Moreover, the study was purely quantitative and could not provide additional insights that could explain the results in more depth. This lack of insights motivates future research on long-term workplace wellness interventions in South Africa using a mixed methods design.

Jarman et al. (2016) proposed that comprehensive workplace wellness programmes should consider both mental and physical health (individual factors) and have work structures that support health promotion (organisational factors). The value of using a mixed methods design in intervention studies is that qualitative data provide further depth drawn from participants' experiences that could reveal deeper insights into factors that contribute to the outcome of PPIs (de Bruin et al., 2020; Page & Vella-Brodrick, 2013). Ouweneel et al. (2013) further echoed that activities employed to promote employee well-being should have been validated regarding their effectiveness. The well-being benefits linked to yoga are explored next to justify it as a valid tool to promote well-being holistically.

3.3 Yoga and its Impact on Well-being

Well-being interventions should utilise appropriate activities and practices that effectively promote well-being indicators (Lyubomirsky et al., 2011; Ouweneel et al., 2013). Support for using yoga as an appropriate tool for a multifaceted workplace PPI is presented in this section. Different elements of yoga are highlighted first to demonstrate its suitability as an intervention tool. Research in support of the effectiveness of the various yoga elements is provided next to demonstrate its uses in different settings among various populations,

targeting a range of aspects. The discussion concludes by summarising the gaps identified in the reviewed literature and the justification for a yoga-based PPI.

Yoga is aimed at promoting lasting well-being (Siegel et al., 2016), which is in line with the aim of PPIs and could therefore be promoted as such. The additional benefit of using yoga as a tool to implement a PPI is that it combines physical, mental, and behavioural practices into a single programme directed at promoting hedonic and eudaimonic domains of well-being. The combination of all these aspects makes yoga unique as a PPI tool compared to other commonly used PPI exercises that focus primarily on psychological or behavioural practices (Page & Vella-Brodrick, 2013; Winslow et al., 2017). The basic elements of Hatha yoga—including physical postures, breathing practices, meditation, and yama and niyama life principles (Hofmann et al., 2017; Siegel et al., 2016)—incorporate various strategies that have been used in workplace well-being interventions. These strategies include physical activity, relaxation, being kind to others, practising gratitude, and meditation (Michishita et al., 2017; Salanova et al., 2013; Shonin et al., 2014; Sianoja et al., 2018). These parallels offer further motivation for using yoga as a tool to implement a multifaceted workplace PPI. Research support regarding the various yoga elements concerning well-being is discussed next to highlight how these elements have been applied and tested in various settings.

The physical element is explored first. A recent systematic review conducted by Domingues (2018) examined the effects of postural yoga (or asana) on positive mental health outcomes in clinical and non-clinical populations of varied age groups. The review only included interventions with a strong focus on physical postures, with intervention duration ranging from seven to 20 weeks. Results were inconsistent and lacked statistical power, but most studies demonstrated the promotion of positive mental health indicators due to yoga practice. These positive mental health indicators included mindfulness, resilience, flourishing, self-compassion, positive experiences, and positive affect. The indicators

supported recommendations for yoga interventions in various settings as a complementary lifestyle practice (Domingues, 2018).

Practising physical postures with intense awareness, or mindfully, is a core element of yoga conducive to well-being related to the mental element (Siegel et al., 2016). This aspect makes yoga different from regular physical activity, such as aerobic exercise, commonly used to manage perceived stress (Hansen et al., 2001). Magalhaes Das Neves et al. (2014) found that somatic awareness (similar to mindful awareness) during exercises brought about significantly lower perceived stress scores compared to aerobic exercise alone. Atanes et al. (2015) reported positive correlations between mindfulness and life satisfaction and positive affect and negative correlations between mindfulness and perceived stress and negative affect in a sample of Brazilian primary healthcare professionals. These findings further validate mindfulness as a valid well-being practice that can promote positive well-being indicators and reduce negative well-being indicators (Atanes et al., 2015; Hansen et al., 2001).

Regarding the behavioural element, there is empirical support that regular yoga practice and adopting and implementing philosophical yogic principles in everyday life enhance subjective well-being (Malathi et al., 2000). The research was conducted among medical staff members in Mumbai, India, who practised for one hour five days a week over four months. In line with this, a United Kingdom (UK) based study conducted by Ivtzan and Papantoniou (2014) found that *regular* yoga practice was associated with greater levels of gratitude and meaning in life, which suggests that yoga can contribute to increased psychological well-being. More regular yoga practising was associated with higher levels of gratitude and meaning in life, underscoring commitment's importance. However, the research did not entail an intervention as such, but comprised a sample of yoga practitioners (n = 124) who completed scales that measured gratitude and meaning in life. These authors argued that

yoga could be an intervention tool to promote individual and relational well-being (Ivtzan & Papantoniou, 2014).

There is ample empirical evidence that indicates the value of yoga in various settings with various populations in the case of physical and psychological outcomes. For example, yoga has been used to reduce stress among patients in a primary healthcare setting (Anderzén-Carlsson et al., 2014), to reduce back pain and perceived stress among working adults (Hartfiel et al., 2012), and improve psychological and emotional well-being and enhance resilience to stress (Hartfiel et al., 2011; Siegel et al., 2016). A meta-analysis by Hofmann et al. (2017) concluded that Hatha yoga is a promising method for treating anxiety. Moreover, yoga studies offer promising effects on enhancing various positive outcomes, including subjective (Malathi et al., 2000), psychological (Hartfiel et al., 2012; Ivtzan & Papantoniou, 2014), and emotional well-being (Hartfiel et al., 2011) as well as decreasing negative outcomes such as perceived stress and back pain (Hartfiel et al., 2012). More recently, findings by Maddux et al. (2017) revealed that power yoga practised twice a week in a gym setting could be effective for stress amelioration and promotion of psychological health among workers experiencing stress. A study by Alexander et al. (2015) revealed that nurses who participated in an eight-week yoga intervention ($n = 20$) showed significant improvements in self-care, mindfulness, emotional exhaustion, and depersonalisation outcomes (two chief components of burnout) compared to controls ($n = 20$).

Dwivedi and Singh (2016) explored the effects of Yoga Nidra as a stress management intervention through a systematic analysis of secondary data from Yoga Nidra studies and a content analysis of a structured questionnaire completed by 30 employees who have been practising the technique over an unspecified length of time. Their findings supported its usefulness for managing symptoms of anxiety and depression, and stress levels via decreased sympathetic nervous system activity and increased parasympathetic nervous system activity,

helping participants positively improve their health and well-being. However, these results should be interpreted with caution as details on the research techniques and analysis used are limited, and it was not indicated how long the technique was applied to yield favourable results. This evidence for the effectiveness of Yoga Nidra in mitigating the effects of stress can be regarded as preliminary. Further support for the effectiveness of Yoga Nidra on stress and well-being comes from Ferreira-Vorkapic et al. (2018) and Moszeik et al. (2020).

Ferreira-Vorkapic et al. (2018) investigated the impact of Yoga Nidra on stress, anxiety and depression among healthy college professors. Moszeik et al. (2020) explored the technique's effects on stress, well-being, mindfulness, and sleep in a general adult population. Both studies reported that Yoga Nidra positively affected the outcome variables despite the different modes of intervention presentation in these studies. In the study by Ferreira-Vorkapic et al. (2018), sessions were carried out in person and lasted 45 to 50 minutes over three months. Moszeik et al. (2020) explored an 11-minute practice using audio recordings over 30 days. Although the impact was solely explored on psychological indicators, evidence suggests that even a short Yoga Nidra practice can positively impact well-being indicators.

The reviewed literature supports the value of using yoga tools to manage negative well-being indicators such as stress, anxiety and depression and promote positive hedonic and eudaimonic aspects of well-being. However, the researcher has not found any studies that specifically explored the use of yoga to implement a multifaceted PPI in a workplace setting. The duration of the yoga interventions reviewed ranged between a minimum of six weeks (Hartfiel et al., 2011) to a maximum of four to five months (Domingues, 2018; Maddux et al., 2017; Malathi et al., 2000). Programme intensity varied among studies ranging from quite intensive programmes of five practice sessions per week to less intensive programmes consisting of two sessions per week (Hartfiel et al., 2011, 2012; Maddux et al., 2017). Session lengths ranged from 20 to 60 minutes each.

According to Lyubomirsky et al. (2011), ideal happiness interventions involve practices supported by empirical research. Based on the evidence presented, it can be argued that yoga is a valid tool to serve as a basis for a multifaceted workplace PPI. It is a versatile, low-cost, holistic, mind-body practice. Each individual starts from where they are, making yoga suitable for all employees regardless of flexibility or fitness levels (Desikachar, 1995). An individual must commit to putting effort into a disciplined practice which builds on progressive stages to progress in practice (Desikachar & Cravens, 1998). Controlled breathing (Edwards & Beale, 2011; Van der Merwe & Parsotam, 2011), mindfulness (Brown & Ryan, 2003; Merkes, 2010; Moszeik et al., 2020; Wolever et al., 2012), and meditation (Ferreira-Vorkapic et al., 2018; Mohan et al., 2011) have all been shown to promote resilience against stress and are also elements of Hatha yoga. These techniques can be regarded as strength-based approaches to enhance well-being but, on their own, lack the physical component added by Hatha yoga. Combining these techniques with physical yoga postures adds additional health benefits and helps relieve the somatic expression of stress in the body, such as muscle tension and stiffness (Belling, 2001). Moreover, along with the applications of the yama and niyama principles, using yoga as a tool for a PPI is a more holistic approach to promoting well-being.

3.4 The Need for PPI in the South African HEI Context

Following the review on the value and importance of well-being dimensions in workplace settings for both individuals and organisations, and workplace well-being intervention research targeting employee wellness, the need for PPI research, specifically in the context of South African HEIs, is now presented. This section provides the rationale for the current study. The importance of and the need to target the HEI context to promote employee well-being using a yoga-based PPI is argued. The target variables and justification for the particular method are given to motivate the overall project aim.

Higher education plays a critical role in creating a sustainable future. It is a key driver for human and economic development and plays a significant role in the country's ongoing transformation agenda through the advancement of human and economic development through education (Cortese, 2003; Field & Buitendach, 2011; Motala & Menon, 2020; Poalses & Bezuidenhout, 2018; Van Straaten et al., 2016). HEIs depend on the collective efforts, skills, and expertise of academic and support staff to deliver high-quality services to students (Poalses & Bezuidenhout, 2018). Section 3.2.4 demonstrated that work-related stress is prevalent among employees in HEIs, making them vulnerable to emotional exhaustion, burnout, and mental health problems (Kinman & Wray, 2020; Poalses & Bezuidenhout, 2018; Watts & Robertson, 2011). Hence, a strengths-based wellness promotion intervention in this context is well warranted. Universities no longer offer the secure, relaxed atmospheres of the past. Negative work outcomes associated with increasing stress may impair productivity and lead to deteriorating interpersonal relationships, negative organisational culture, and a poor overall level of service delivery (Poalses & Bezuidenhout, 2018). The ongoing ramifications of the recent COVID-19 pandemic further add additional stress and workload on staff at both contact and open distance learning institutions alike, which provides further justification for a workplace PPI to promote positive well-being as a protective resource against stress (Hedding et al., 2020; Motala & Menon, 2020). Gewin (2021) demonstrated that burnout as a consequence of the pandemic is particularly rampant in academics. Research delays, issues associated with forced remote working arrangements, and childcare responsibilities—particularly for women—are all taking a toll on employees' well-being, causing increased stress and anxiety.

A literature search for workplace interventions in South African HEIs to promote employee well-being revealed no relevant research in this regard. The review of existing literature on workplace well-being interventions illuminated the following gap: the need for

research investigating long-term, multifaceted workplace wellness programmes combining mental, physical, and behavioural practices to promote flourishing mental health, specifically within the South African context. Despite recommendations from previous research for employee health and well-being promotion (Barkhuizen et al., 2013; Vazi et al., 2013), the researcher is unaware of any published research based on studies that have specifically investigated methods for promoting well-being from a strengths-based perspective amongst employees in HEIs within the South African context. Vazi et al. (2013) called for interventions to promote the psychological well-being of educators through enhancing autonomy, environmental mastery, personal growth, positive relations with others, life purpose, and self-acceptance to help them cope better with stress. International findings by Hartfiel et al. (2011) provide evidence for the feasibility of offering yoga sessions to employees (university staff specifically) in the workplace to enhance emotional well-being and resilience.

Der Kinderen and Khapova (2020) highlighted that job and work contextual factors interact with personal factors to influence employee well-being. In support of this, Biggio and Cortese (2013) indicated that well-being in the workplace does not solely depend on external factors such as the working or organisational environment within which employees operate. Positivity, socio-emotional skills, and values are also factors that influence employee well-being. These are aspects targeted in individual-based workplace well-being interventions (Salanova et al., 2013). These aspects suggest that workplace well-being can be promoted from below (bottom-up) by influencing individual qualities and behaviours and not only from above (top-down), through action by management, which is often recommended (Barkhuizen et al., 2013; Rothmann, 2013; Spreitzer & Hwang, 2019).

Sheldon and Lyubomirsky (2006) highlighted that changes in circumstances only bring about temporary changes in subjective well-being as people tend to return to their

baseline or set point levels after adjusting to circumstances. Many of the challenges employees experience in South African HEIs are influenced by institutional factors and might not be changeable, or even if changed, might not be enduring. This further necessitates using intentional activities that could form part of multifaceted workplace PPIs. Individual-based workplace well-being interventions aim to provide employees with general tools to promote their overall well-being and management of stress better. Still, they do not eliminate the sources of stress. Although organisational factors often cause work stress, a bottom-up approach that empowers employees to manage work demands can be helpful in situations where organisational factors remain unchanged.

Based on the reviewed evidence, gaps in the research, and the importance of well-being in its own right, the present study argues for implementing a yoga-based PPI in a South African HEI. The literature on well-being interventions shows the need for a workplace PPI that includes multiple facets conducive to holistic well-being promotion including physical activity, relaxation, meditation, and behavioural practices such as being kind to others, that could also promote social climates of the workplace. Yoga as a PPI meets these criteria because it contains various aspects that target both the hedonic and eudaimonic domains of well-being through mental, physical, and behavioural practices that can be utilised for a multifaceted PPI. The selected target variables are emotional well-being, positive functioning, and work engagement (positive, high well-being indicators) and perceived stress as a threat to well-being (negative, low well-being indicator). Yoga is suitable to target these factors because it offers a range of tools that have been validated to promote well-being and serve as a protective resource against stress.

In light of the paucity of local studies on long-term strength-based workplace interventions aimed specifically at the promotion of well-being and the importance highlighted for targeting HEIs, this study set out to investigate the effectiveness and

feasibility of using yoga as a tool for a PPI in a selected HEI in the South African context through applying a mixed methods approach to explore the effectiveness on well-being indicators including hedonic, eudaimonic, and social dimensions, measured as mental health, emotions, work engagement, and perceived stress.

3.5 Chapter Summary

Despite the increase in literature on positive psychology studies in work contexts, there is a need for more research focusing on taking a strengths-based approach and exploring outcomes related to positive mental health as a multidimensional construct including hedonic, eudaimonic, and social dimensions of well-being, particularly in the context of South African HEIs. The roles of emotional, psychological, and social well-being and work engagement and how these impact workplace wellness on the individual and organisational levels were discussed. There is growing concern about the impact of perceived stress, and the need to manage stress to prevent burnout and compromised well-being is of obvious importance. Research on workplace well-being interventions offers encouraging outcomes, although further research exploring the effectiveness and feasibility of longer-lasting interventions is still needed. The impact of yoga on well-being dimensions holds promising outcomes. When used as a tool to present a workplace PPI, emotional, psychological, and social well-being can be targeted on an individual level, influencing the organisational climate, another important factor for workplace well-being. The next chapter presents the research methods and outline of the yoga-based PPI implemented in a South African HEI.

4 Chapter Four: Research Methodology

This chapter provides a detailed description of the steps taken to carry out the study. The two research questions included were: 1) What are the effects of a yoga-based PPI on mental health, emotions, work engagement, and perceived stress among participating employees? 2) What are participants' perceptions and experiences of using a yoga-based PPI to promote their sense of well-being? This quasi-experimental study aimed to explore and describe the effectiveness and feasibility of using yoga as a PPI to promote employees' well-being in a workplace setting through a mixed methods design, informed by the pragmatist paradigm (Babbie, 2008; Barns, 2019). The research objectives comprised developing and implementing a yoga-based PPI, determining the programme's impact on selected variables, and exploring participants' perceptions and experiences of taking part in the intervention and using the programme tools to enhance their sense of well-being.

In this chapter, the hybrid mixed methods design (Meixner & Hathcoat, 2018) is described, along with a justification for using the different methods. Design decisions and the rationale for selecting the specific methods and processes are illuminated as a reflexive account to inform the rigour and quality requirements for sound scientific research. A procedure diagram serves as a visual aid of the study's design (McBride et al., 2018; Meixner & Hathcoat, 2018; Plano Clark & Ivankova, 2016). Following the overall description of the design, the reader is guided through all the practical steps and processes taken to carry out this study, from selecting the study site, establishing gatekeeper relations, recruiting research participants, designing and implementing the intervention, and gathering the research data. The analysis techniques applied to the different quantitative and qualitative data sets are discussed, and the measures taken to ensure research rigour are indicated. Finally, the ethical considerations applied throughout the process are discussed.

4.1 The Methodological Paradigm

The pragmatist paradigm informed the research methodology of this study.

Pragmatism has been considered the best philosophical position to anchor mixed methods research because the research question is the force that drives the methodological approach (Meixner & Hathcoat, 2018). The pragmatic paradigm endorses applying assumptions of different worldviews and accepts the existence of singular and multiple realities (Feilzer, 2010; Johnson & Onwuegbuzie, 2004; Meixner & Hathcoat, 2018). This endorsement is well suited for mixing the various philosophical underpinnings of quantitative and qualitative methods.

The quantitative strand of the study was informed by positivist assumptions, including hypothesis testing and exploring the existence of an objective reality outside of the researcher that can be studied independently (Mackenzie & Knipe, 2006). A quantitative research strategy was used to assess the effects of the intervention on the selected well-being outcomes objectively without personal involvement or vested interest on the part of the researcher (Willig, 2008).

The qualitative strand was informed by interpretivist assumptions of multiple subjective realities that are perceived and constructed by individuals and informed by personal experiences, beliefs, and biases (Mackenzie & Knipe, 2006; Meixner & Hathcoat, 2018). Participants were asked to reflect on their personal experiences and perceptions of their programme participation to obtain these multiple subjective realities constructed by individuals. Interpretivist assumptions also catered for the researcher's intimate positioning in the research processes—qualitative research methods and techniques value the researcher's involvement and subjectivity as a strength in the process (Braun & Clarke, 2006; Meixner & Hathcoat, 2018; Willig, 2008). The particular mixed methods design of the current study is described next.

4.2 The Mixed Methods Design

Mixed methods research is characterised by a meaningful combination of quantitative and qualitative research techniques into a single study geared to best answer a particular research question (Guest, 2013; Johnson & Onwuegbuzie, 2004). A mixed methods approach was justified for this study as the combination of quantitative and qualitative strategies offered the best likelihood of obtaining valid and useful answers to the research questions. This design could offer a more complete picture than either qualitative or quantitative data would provide alone (McBride et al., 2018). While mixed methods research allows flexibility and freedom in design, it is important to justify and explain the use of particular methods, conduct all the techniques with integrity, and adhere to the appropriate guidelines for producing valid and worthy outcomes (Meixner & Hathcoat, 2018).

This intervention-based project was geared towards implementation in a real-world setting to explore if a yoga-based PPI in the workplace would be an effective and feasible strategy to promote employee well-being. While the two research questions were instrumental in adopting a mixed methods design (Plano Clark & Ivankova, 2016), doing research in non-controlled environments, such as a workplace setting, brings many uncertainties. The characteristic design flexibility of mixed methods research was another motivating factor for selecting this strategy (Plano Clark & Ivankova, 2016). The researcher had to mitigate tensions between honouring the needs of the HEI and the employees at the selected research site on the one hand, and designing a study that would produce scientifically sound data from which to inform evidence-based outcomes that would shed light on the effectiveness and feasibility of the intervention, on the other. The project had limited resources, a particular time-frame, and employee interest in the intervention or their willingness to partake in the research activities could not be established beforehand—which would have implications on the statistical power, as the sample size is contingent on expected

effect size (Barns, 2019; Field, 2009). Using a mixed methods design allowed flexibility to draw on research tools that would aid viable, evidence-based outcomes (Meixner & Hathcoat, 2018).

The mixed methods approach had a quasi-experimental component to further aid the implementation of the PPI in a real-world context. Employees had to be invited to voluntarily participate out of their own interest to more closely mimic a real-world scenario of presenting a wellness programme in the workplace. Barns (2019) explained that the quasi-experimental design offers more flexibility than true experiments while still attempting, to varying degrees of rigour, to determine a causal relationship between the intervention and the outcome variables without requiring random selection and assignment of research participants. Although the quasi-experimental research strategy attempts to answer cause-and-effect questions about relationships between variables, it does not produce unambiguous explanations (Barns, 2019; Gravetter & Forzano, 2009). The mixed methods approach helped counter this quantitative weakness in that it allowed for the collection of qualitative data informed by participants' subjective experiences that could illuminate other potential influencing factors that might have impacted the study variables.

High attrition and insufficient sample size are common limitations of workplace intervention studies and have been cited as possible explanations for insignificant findings (Keeman et al., 2017; Ouweneel et al., 2013; Strijk et al., 2013). When only positivist quantitative approaches are used, there is no additional qualitative data inherently informed by participants' personal experiences that could aid a deeper understanding of the insignificant findings. An interpretive paradigm can address this shortcoming to supplement the limitations of the positivist approaches. A qualitative description (Kim et al., 2017) was suitable to explain the quantitative findings further and shed more light on improving the particular design.

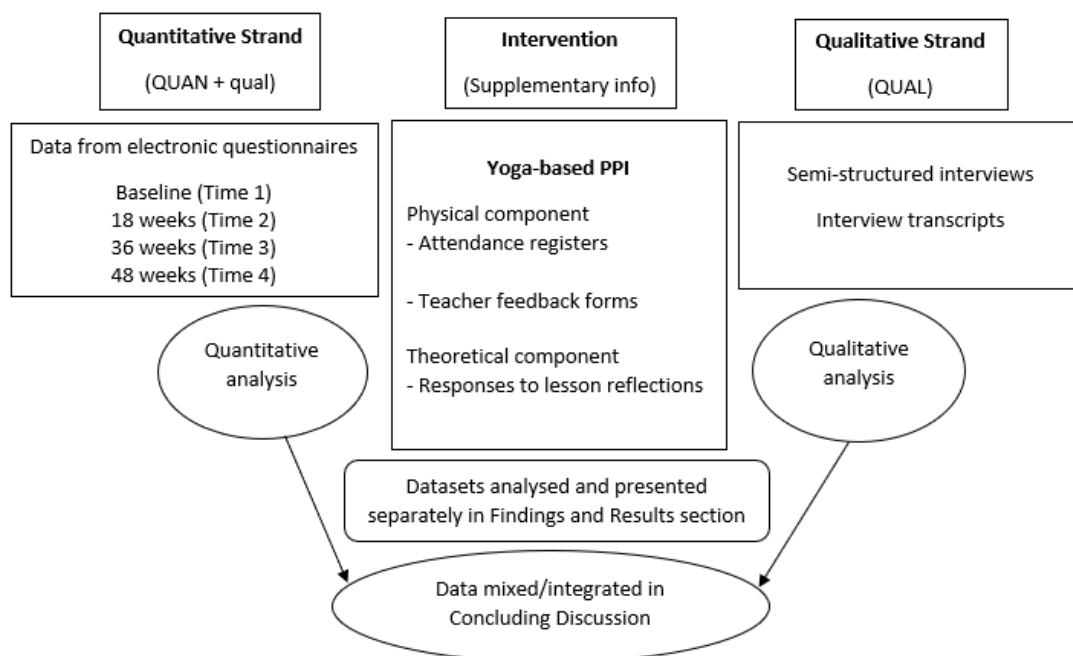
4.2.1 An Equal Status Hybrid Concurrent Design Typology

Typologies are used to describe and classify mixed methods research design (Guest, 2013; Plano Clark & Ivankova, 2016). Optimising the timing, mixing, and priority of a study's quantitative and qualitative methods are common characteristics to consider in mixed designs (Guest, 2013; Plano Clark & Ivankova, 2016). Although a dynamic approach or hybrid design choice was chosen in this study, the particular design most closely resembles an equal status concurrent design typology description (Meixner & Hathcoat, 2018; Plano Clark & Ivankova, 2016). This type of design could also be classified as a convergent parallel design, in which timing is concurrent with equally weighted strands that are typically mixed at the level of interpretation (Meixner & Hathcoat, 2018). However, this does not mean quantitative and qualitative data are collected at the same time, but rather relates to the intentionality of the design. Through this design, different but complementary data on a topic are obtained to capitalise on the strengths and dilute the weaknesses of separate quantitative and qualitative approaches (McBride et al., 2018). The current study's design is considered a hybrid, concurrent design as data were collected during different phases, and quantitative data along with supporting qualitative items were collected in the quantitative strand (QUAN + qual) (Meixner & Hathcoat, 2018). Moreover, the study also included an intervention phase during which supplementary information was collected. In a typical concurrent design, quantitative and qualitative data are collected separately during each phase, represented as (QUAN + QUAL); hence this design is regarded as a hybrid.

Thinking through a study during the conceptualisation phase is useful for identifying possible dilemmas or obstacles and interrogating whether mixed methods research is the best approach (Meixner & Hathcoat, 2018). Due to the uncertainty around interest and participant uptake—which had important implications on the statistical power of the data (Barns, 2019)—the design initially catered for the inclusion of a control group with the alternative

strategy of exploring within-group differences of intervention participants in case there was insufficient participants to serve as controls (Meixner & Hathcoat, 2018). The planned inclusion of a control group was an attempt to limit threats to the study's internal validity, as it would allow for the scores of the two groups to be compared to help determine if the intervention or other time-related factors were responsible for the observed changes (Gravetter & Forzano, 2009; Pandey & Patnaik, 2014). However, while randomised controlled trials are commonly considered the gold standard in establishing cause-and-effect relationships, yoga studies frequently entail single-arm interventions without including a control group. Although some consider this as a limitation of yoga research (Domingues, 2018), it could be argued that exploring within-group intervention effects would be a suitable alternative in this particular research context. The initial sample size depended on participant interest, with a maximum of 40 participants who could be accommodated in the intervention group.

Despite this flexibility, the selected design was fixed. All components were planned during the conceptualisation and design stage, and no additional components were added to address unexpected results or further probe any issues (Meixner & Hathcoat, 2018; Plano Clark & Ivankova, 2016). The procedural diagram (Figure 4.1) visually depicts the realised design, the different data items, and supplementary information collected throughout the research process.

Figure 4.1*Procedural Diagram of the Mixed Method Design*

The quasi-experimental, repeated measures, equal status, and hybrid concurrent mixed method design was structured around the implementation of the 36-week intervention. The collected quantitative and qualitative data are discussed in detail in Section 4.6. The design comprised three phases: the quantitative strand, the intervention, and the qualitative strand.

Data for the quantitative strand was collected through an electronic questionnaire which was administered at four different times, 0 weeks (time 1; baseline), 18 weeks (time 2; intervention mid-point), 36 weeks (time 3; intervention conclusion), and 48 weeks (time 4; 12 weeks post-intervention). The questionnaire generated the primary quantitative data with supplementary open-ended qualitative responses to help determine the programme's impact on the main study variables. Demographic information on the sample was collected with the baseline questionnaire. Participants' staff numbers and e-mail addresses were used as the unique identifier to track and connect subsequent responses.

Supplementary information was collected during the intervention phase. Attendance registers were kept to track participants' commitment to the physical yoga practice sessions. Wellness facilitators had to provide feedback after presenting a session, including a personal rating of how well they felt they had implemented the session and a summative reflection of what they presented. Participants' responses to the theoretical lessons were captured to track adherence to the theoretical component.

The primary qualitative data were gathered through semi-structured interviews after the conclusion of the intervention phase. The aim was to obtain participants' reflections and experiences of participating in the programme to explore how it impacted their sense of well-being (Kim et al., 2017).

Following this overview of the research design, the various steps taken to implement the research process are described next. The first practical step in the research implementation phase was to secure a suitable HEI at which to present the intervention and build supportive partnerships to help implement the programme. The latter is discussed next.

4.3 Study Site and Partnerships

The initial preparation for the study entailed securing a suitable research site via the gatekeepers, establishing a strong collaborative partnership with relevant institutional partners, and recruiting additional yoga teachers to act as wellness facilitators to help implement the intervention.

4.3.1 Study Site and Gatekeeper Relations

The study was conducted at a purposively selected HEI, a large open-distance university situated in the Gauteng province, South Africa. Institutional buy-in was a critical selection criterium—the success of workplace wellness programmes rested heavily on the support provided by the top and middle management, who could influence the uptake and effectiveness of wellness services (Bretland & Thorsteinsson, 2015; Naicker & Fouché,

2003). Therefore, a suitable study site was selected based on need, access, buy-in, and institutional willingness to promote and support the initiative (Bretland & Thorsteinsson, 2015; Ouweneel et al., 2013; Strijk et al., 2013). These were the only criteria that informed the selection of the study site. Other aspects such as the type of HEI (college, technikon, university), size, or the teaching mode (residential or distance), were not considered.

Knight et al. (2017) emphasise that the success of the researcher-organisation relationship is also crucial for the successful implementation of workplace interventions. Access to the study site was gained through the gatekeepers in the Department of Human Resources. The researcher initially approached the Employee Wellness manager at the target university to present the concept and determine institutional need and buy-in. The initiative was very well received, and several meetings followed to introduce the researcher to relevant institutional partners and discuss the study processes—these included the Sport and Recreation Co-ordinator and the Building and Maintenance Manager.

Multiple meetings took place with the Sport and Recreation co-ordinator during which the particular need for the intervention, overall project timelines, the wellness programme, recruitment strategies, and research requirements were discussed. A specific need for a wellness intervention at one of the satellite campuses—where no employee wellness activities were offered at the time—was confirmed. Employees at the target campus had previously reported experiences of stress and having to deal with various work-related issues which challenged their well-being, such as high workloads and facing aggressive students who sometimes threatened them with violence. The Sports and Recreation co-ordinator also suggested the most desirable times to present the intervention sessions and advised on advertisement and recruitment strategies.

Partners from the Building and Maintenance team were met on the target campus. The identified venue had to be verified by the researcher to ensure its suitability in terms of

location/accessibility, size, and other important requirements such as ventilation, flooring, and privacy. A suitable space to present the yoga sessions on-site was essential to allow easy access to research participants—a strategy to promote programme adherence (Strijk et al., 2013). Other practicalities, including parking arrangements and health and safety briefings required by the Occupational Health and Safety guidelines, were also discussed.

All discussions and planning with the institutional partners were provisional, as these took place before obtaining written institutional support and ethical clearance. All processes were implemented once all clearance and permission were received in written form. After the institutional partnership was established and essential details around the project implementation were planned, the next task was to find suitable yoga teachers to act as wellness facilitators to co-present the weekly yoga sessions.

4.3.2 Recruiting Wellness Facilitators

The 36-week intervention phase required teachers who were available for the entire duration of the project and willing to adhere to the research requirements linked to the programme's implementation. An advertisement was sent to four potential teachers in the researcher's network. Individual meetings were scheduled with interested teachers to explain the project aim and implementation plan in detail. The compensation for the sessions was also explained, and teachers had an opportunity to give inputs for developing the physical yoga programme.

Three additional teachers were recruited based on their availability and willingness to commit and adhere to all implementation requirements. The team of wellness facilitators comprised four qualified and experienced yoga teachers (including the researcher): three females and one male, with ages ranging between 36 and 60 years.

4.4 Population and Sample

Aspects around population and sampling are discussed next. The overall sampling strategy is described first, followed by the participant recruitment process and the subsequent samples obtained for the quantitative and qualitative strands.

4.4.1 Sampling Strategy

The target population comprised all employees at HEIs. In contrast, the study sample was drawn from the accessible population, which entailed those employees on the two target campuses at the purposively selected HEI (Gravetter & Forzano, 2009). A purposive, non-random sampling strategy was employed with participation based on volunteering, which was accommodated by the flexibility of the quasi-experimental nature of the mixed methods design (Barns, 2019; Meixner & Hathcoat, 2018). All interested employees at the target campuses were invited to select themselves into either the intervention or control group if they were willing to commit to the 36-week programme and all research activities. Within happiness intervention research, Lyubomirsky et al. (2011) proposed self-selection and continued effortful practice (high compliance) as two conditions under which positive activities are most effective (Ouweneel et al., 2013; Strijk et al., 2013). The more sustained effort participants exert throughout the intervention, the greater the probability of enhanced well-being. This sustained effort is more likely when the intervention is congruent with participants' values and personally meaningful to them. Intrinsic meaning motivates participants to invest their efforts into the intervention and is consequently more likely to be present when employees voluntarily decide to participate in the programme (Ouweneel et al., 2013). Moreover, the literature on well-being promotion further states that programme success depends on person-activity fit, readiness for change, and appropriate timing (Lyubomirsky et al., 2005; Strijk et al., 2013). In light of this, randomly selecting participants as in a randomised controlled trial did not make sense and did not resemble a real-world

scenario where interested employees would choose to participate in a workplace wellness programme.

Although the non-random, self-selection sampling strategy resulted in a biased sample of volunteers who were already motivated to enhance their sense of well-being, this bias was relevant and justified in line with the theory of sustainable happiness and resulted in a group of interested and willing participants, who were actually the target of the intervention (Lyubomirsky et al., 2005; Seligman et al., 2005). Self-selection sampling bias was therefore not regarded as a design limitation as it fitted with the theoretical underpinning of the conceptual framework (Lyubomirsky et al., 2005). However, the sample's particular characteristics were highlighted in the reporting of the study outcomes to indicate the limits in terms of generalising the research findings to the target population (Gravetter & Forzano, 2009).

4.4.2 Participant Recruitment and the Study Sample

An institutional branded advertisement was created that invited all interested employees at the two target campuses (one on-site and a nearby off-site campus)—regardless of age, position, or job title—to participate in a research yoga wellness programme. Targeting all employees at the selected campuses avoided discrimination in line with the Employment Equity Act and the ethical research practice of presenting everyone with an opportunity to participate in the research initiative (HPCSA, 2008). Moreover, the study aimed to explore the feasibility of offering the programme to promote employee well-being in an HEI setting; hence, no specific sub-group was targeted. The reason for extending the invitation to employees from the neighbouring campus (off-site from where the yoga sessions were offered) was to increase recruitment potential and because some employees on the off-site campus previously enquired about yoga as a wellness activity. Since the campus was close by, this extension was feasible and justified.

The advertisement was published electronically via the official staff communication channels on the two target campuses. These advertisements indicated that yoga classes would be presented Tuesdays and Thursdays commencing mid-April (16 April) 2019 and were accompanied by more information on the study's purpose and aim, eligibility criteria, related research activities, participation expectations, and the researcher's contact details (see Appendix A). The advertisement also included an invitation to an information seminar (scheduled) early in April 2019 (4 April). The notices were re-published once weekly over three weeks before the information seminar.

The information seminar aimed to clarify the purpose of the well-being promotion programme, provide detailed information on the research and intervention activities, and introduce the team of wellness facilitators. Each facilitator briefly reflected on how they benefited from practising yoga and how they got involved in teaching. Common myths and misconceptions around yoga were addressed, and attendees had an opportunity to ask questions to address any concerns about their participation.

Regardless of whether they attended the information seminar, all interested employees had to mail the researcher to confirm their interest in participating and which group they were volunteering for (either the intervention or control group). Prospective participants were mailed further details on the study along with the consent and indemnity forms they had to complete. Specific inclusion criteria informed participant eligibility, namely, being an employed staff member at the selected HEI, being willing to voluntarily commit to the completion and participation in all research activities, and being physically capable to engage in the physical yoga programme of medium intensity—this exclusion was similar to a situation where an individual wanted to take up physical activity in their everyday life and was thus ethically justified.

Submission of the signed consent and indemnity forms (in the case of intervention group participation) secured the participants' involvement in the study. Participant uptake for the control group was insufficient (N = 2). After completing the baseline measures, these participants were thanked for their involvement and notified of the control group's discontinuation. As a token of appreciation, they received an electronic copy of the programme manual after completing the research intervention. Consequently, the study explored within-group differences of the research participants, who comprised a self-selected sample of 46 interested employees. The demographic characteristics of the sample are provided in Table 4.1.

Table 4.1*Demographic Characteristics of the Overall Sample*

Variable	Category	Time 1		Time 2		Time 3		Time 4	
		n	%	n	%	n	%	n	%
Sex	Female	42	91,3	25	86,2	15	78,9	11	84,6
	Male	3	6,5	3	10,3	3	15,8	1	7,7
	Don't want to answer	1	2,2	1	3,4	1	5,3	1	7,7
Race	African	39	84,8	22	75,9	12	63,2	6	46,2
	White	4	8,7	4	13,8	4	21,1	4	30,8
	Indian	1	2,2	1	3,4	1	5,3	1	7,7
	Don't want to answer	2	4,3	2	6,9	2	10,5	2	15,4
Relationship status	Single (not in a relationship)	5	10,9	2	6,9	0	0,0	0	0,0
	Single (in a relationship)	12	26,1	7	24,1	6	31,6	4	30,8
	Married	20	43,5	15	51,7	11	57,9	7	53,8
	Divorced	2	4,3	1	3,4	0	0,0	0	0,0
	Don't want to answer	7	15,2	4	13,8	2	10,5	2	15,4
Education level	Matric	2	4,3	2	6,9	1	5,3	1	7,7
	Post-matric qualification other than Graduate Degree	8	17,4	7	24,1	2	10,5	0	0,0
	Graduate Degree	30	65,2	16	55,2	12	63,2	9	69,2
	Master's Degree	2	4,3	1	3,4	1	5,3	1	7,7
	Doctorate Degree	1	2,2	1	3,4	1	5,3	1	7,7
	Don't want to answer	3	6,5	2	6,9	2	10,5	1	7,7
Job level	Junior Level	16	34,8	11	37,9	5	26,3	3	23,1
	Mid-Level	12	26,1	6	20,7	4	21,1	3	23,1
	Senior Level	7	15,2	7	24,1	6	31,6	3	23,1
	Mid-management level	8	17,4	4	13,8	3	15,3	3	23,1
	Intern (other)	1	2,2	0	0,0	0	0,0	0	0,0
	Don't want to answer	2	4,3	1	3,4	1	5,3	1	7,7

Note. Time 1 – baseline, N = 46; Time 2 – intervention mid-point, N = 29; Time 3 – intervention conclusion, N = 19; Time 4 – post-intervention, N = 13.

The majority of the sample consisted of married, African females holding a graduate degree. Age ranged from 24 to 64, with a median age of 44 years. Two of the 46 participants (4%) were situated on the off-site campus—both were dedicated and responded to all four questionnaires. The majority of the sample reported that they were not participating in any of the existing employee wellness activities (86.96%) and had never practised yoga before (89.13%). Just over half of the participants (56.52%) indicated that they engaged in regular physical or other wellness activities such as meditation or mindfulness practices—running, walking, and gym workouts were the most commonly reported physical activities the participants reported.

A sub-sample of willing participants was selected near the end of the 36-week period to reflect on their experiences and perceptions of participating in the intervention and using the programme tools to promote their sense of well-being. Initially, an invitation was sent out to all active participants ($n = 43$), inviting them to volunteer to participate in the interviews. This approach produced only four responses, and an alternative selection strategy was employed to increase the sample size to the ten planned interviews.

To yield a suitable group from which to select additional participants, adherence to research activities (completion of electronic questionnaires and attendance of practical yoga sessions) was considered and informed the inclusion criteria for identifying the qualitative sub-sample. It was decided to consider only those participants who responded to all three questionnaires distributed (baseline, 18 weeks, and 36 weeks) and attended a minimum of 40 per cent of the yoga practice sessions throughout the entire intervention duration. These selection criteria would allow those considered as high and low adherence participants to be included in the sub-sample to gain deeper insights into driving factors behind programme commitment and challenges experienced concerning adherence.

This selection strategy yielded 16 eligible participants, including the four initial volunteers. Six additional participants were randomly selected from the eligible group, one male and five more females. They were all informed that they were randomly selected from the eligible group and asked to indicate if they were willing to volunteer for the interviews. All six additional participants invited to the interviews agreed. Demographic details describing the qualitative sub-sample for the main qualitative strand are presented in Table 4.2.

Table 4.2

Demographic Characteristics of Interviewed Participants

Variable	Category	n	%
Sex	Female	9	90,0
	Male	1	10,0
Race	African	5	50,0
	White	3	30,0
	Indian	1	10,0
	Don't want to answer	1	10,0
Relationship status	Single (not in a relationship)	2	20,0
	Single (in a relationship)	3	30,0
	Married	4	40,0
	Don't want to answer	1	10,0
Education level	Matric	1	10,0
	Post-matric qualification other than Graduate Degree	1	10,0
	Graduate Degree	6	60,0
	Master's Degree	1	10,0
Job level	Doctorate Degree	1	10,0
	Junior Level	4	40,0
	Mid-Level	1	10,0
	Senior Level	3	30,0
	Mid-management level	2	20,0

Note. n = 10

Most participants in the sub-sample were African females in mid-level positions and above, with two at the mid-management level. Their ages ranged from a minimum of 32 to a maximum of 64 years, with a median age of 47. Two of the participants were situated on the off-site campus. The yoga-based PPI and its implementation is discussed next.

4.5 The Yoga-based Workplace Positive Psychology Intervention

The intervention phase entailed the implementation of the 36-week structured yoga-based PPI that addressed the identified need to explore longer-term workplace well-being interventions beyond the commonly observed durations of two to 20 weeks (Chu et al., 2014; Domingues, 2018; Hofmann et al., 2017; Mills et al., 2013). The 36-week intervention period was also meant to allow participants sufficient time to practice the various yoga techniques (Gardner et al., 2012), and investigate the feasibility and sustainability of the programme and its effects on hedonic and eudaimonic well-being dimensions. Yoga is no “quick-fix” solution, but a long-term lifestyle practice and participants’ commitment to the programme was motivated as such.

The researcher designed the yoga-based PPI with additional inputs from the other wellness facilitators. It had to be considered that participants would likely include individuals who were new to the practice of yoga, there was only one hour allocated for the sessions, and participants had to return to their work duties afterwards. This collaborative effort also promoted a sense of shared ownership amongst the wellness facilitators. Teachers needed to present what they believed in as they transmitted their energy and enthusiasm to class participants, which could impact the intervention's consequences (Miglianico et al., 2019).

The programme aimed to teach a set of principles and encourage behaviours conducive to promoting holistic well-being using various yoga tools. The intervention included a theoretical and physical component. The theoretical component aimed to teach the practice principles (non-judgemental acceptance of where you are, patience and gradual progression, non-comparison or competitiveness) as well as the yama and niyama behaviours and attitudes that are in line with various positive psychology concepts associated with enhanced well-being. It comprised a series of 12 short lessons, each lasting two or three weeks (see Table 4.3), distributed electronically via e-mail. Participants were encouraged to

consider the information in each lesson and to apply the core principles in their everyday lives and during the physical yoga practice sessions.

Table 4.3

Structure of Theoretical Component

Lesson	Description	Duration
1	Introduction to the basic principles of practice (goal setting, non-judgemental acceptance of where you are, patience, tolerance, and gradual progression, non-comparison/non-competitiveness) (Part 1)	2 weeks
	Introductions to yama and niyama practices (Part 2)	2 weeks
Yama practices		
2	Ahimsa: Non-violence, kindness, and friendliness	3 weeks
3	Satya: Truthfulness	3 weeks
4	Asteya: Non-stealing	3 weeks
5	Brahmacarya: Movement toward the essential. Self-control and moderation	3 weeks
6	Aparigraha: Non-attachment, non-greediness	3 weeks
Niyama practices		
7	Sauca: Inner and outer cleanliness, purity	3 weeks
8	Samtosa: Modesty, contentment	3 weeks
9	Tapas: The removal of impurities in our mental and physical systems through the maintenance of correct habits such as sleep, exercise, nutrition, work, and relaxation	3 weeks
10	Svadhayaya: Self-inquiry and examination	3 weeks
11	Isvarapranidhana: Reverence to a higher power, surrender	3 weeks
Programme conclusion		
12	Reflection of lessons and practices	2 weeks
	Overall duration	36 weeks

The physical component comprised the yoga practice sessions. During these sessions, participants were taught a sequence of yoga poses they could use as a basis for taking on a personal practice after the programme's conclusion. Practice sessions took place twice a week and lasted 45-50 minutes. Suitable days and times for the sessions were selected in consultation with the Sport and Recreation co-ordinator. Lunchtime slots were recommended as most suitable as staff had other life and family commitments before and after work. Two sessions a week were offered to aid regular attendance. If a session was missed, another

opportunity was available to attend during the same week. Two slots were available on each of the two days to accommodate the lunchtime rotations (four sessions), and participants were encouraged to attend two sessions a week.

The following techniques were combined in the physical practice sessions:

- Focused attention and mindfulness
- Conscious, rhythmic/deep breathing
- Physical yoga poses
- Relaxation/meditation techniques

The physical practice sessions were structured so that the participants gradually learnt a balanced yoga sequence. The sequence was taught in two phases, sequences A and B. Each phase was taught for eight weeks, as suggested by the practice principles of nervous-system-informed yoga (Lutz, 2014), and repeated twice during the programme. Table 4.4 provides a broad overview of the implementation structure.

Table 4.4

Implementation Structure of Physical Component

Sequence	Technique and session structure	Duration
Sequence A	Pawanmuktasana series + Yoga Nidra	8 weeks
Sequence B	Surya Namaskar + Yoga Nidra	8 weeks
Sequence A	Pawanmuktasana series + Yoga Nidra	8 weeks
Sequence B	Surya Namaskar + Yoga Nidra	8 weeks
Sequence A+B	Pawanmuktasana series + Surya Namaskar + Yoga Nidra	4 weeks
Overall duration		36 weeks

Sequence A comprised the Pawanmuktasana series by Swami Satyananda (Saraswati, 2013a). It is divided into three groups (series one, two, and three), each with unique postures practised in a set sequence. The series serves as preparation for practising more advanced yoga postures, which can be physically demanding without sufficient preparation. These series accommodate beginners and advanced practitioners, regardless of age, body type,

flexibility, or fitness level. Series one is termed the anti-rheumatic groups and consists of a series of joint rotations throughout the entire body. Series two focuses on the abdominal region and digestive system. Series three comprises postures to unblock and improve the flow of energy in the body. It also helps break down neuro-muscular knots, activates the heart and lungs, and improves the endocrine system's functioning, which is important for physical health (Saraswati, 2013a). The three series were introduced and practised consecutively, starting with series one and working up to series three. Each series was initially practised over two weeks (see Appendix B for a detailed breakdown of the programme presentation). This was specifically to prepare participants for sequence B safely, gradually, and progressively.

The focus of sequence B was Surya Namaskar, commonly known as Sun Salutations. It consists of a dynamic flow of a series of postures more physically demanding than the Pawanmuktasana. Practising it regularly helps to loosen up and stretch the body, tone joints, muscles, and internal organs (Saraswati, 2013a). The aim was to teach the sequence gradually over the first eight weeks of its presentation, and it was taught in a preparatory manner where the steps were presented and explained in detail. Some techniques from Pawanmuktasana were used as a warm-up before Surya Namaskar. Based on the participants' unique fitness, flexibility, and body types, the various levels of intensity with which to approach the sequence were taught in progressive stages.

Yoga Nidra was used as a meditative relaxation practice to conclude the physical practice sessions. The technique is commonly known as “psyche sleep” (Dol, 2019) and is a systematic method for bringing about complete mental, emotional, and physical relaxation (Saraswati, 2013b). Yoga Nidra can be practised by anyone and requires no previous investment or training in meditation experiences or practices (Moszeik et al., 2020). It is essentially a guided meditation characteristically carried out while lying down. The

meditation entails a systematic sequence of perception exercises, such as breath awareness and focusing on certain body parts sequentially, which entails the characteristic rotation of consciousness (Moszeik et al., 2020; Saraswati, 2013b). The practice aims to relax completely while remaining fully alert to enter the threshold state between sleep and wakefulness, where contact with the subconscious and unconscious dimensions occurs spontaneously (Saraswati, 2013b). It is said that “through the practice of Yoga Nidra, we are not only relaxing, but restructuring and reforming our whole personality from within” (Saraswati, 2013b, p. 15). In this deeply relaxed state, the mind is more susceptible to the individual’s intentions which are set as a mental resolve, also known as a sankalpa. These intentions aim to change hindering habits and tendencies into patterns and behaviours that are more conducive to happiness and well-being. Thus, Yoga Nidra served as a tool for relaxation and transformation.

The physical yoga sessions all followed a general structure. Lessons started with a few minutes of meditative stillness to help participants settle down, relax, become present in the here and now, and tune into their bodies. Mindfulness techniques were very much part of switching off from work responsibilities and becoming fully present in the moment. The initial actions were followed by rhythmic, conscious breathing. Participants were taught basic healthy breathing techniques (conscious rhythmic breathing), abdominal breathing, and full yogic breath. To conclude the initial phase, participants were invited to set their intention for the practice and any aspect they would like to focus on during the session (for example, practise without judgement or not comparing themselves with others). Following this preparation, the current theoretical lesson was recapped and reflected upon before the start of the particular sequence. Wellness facilitators gave an overview of how they perceive and understand the principles and gave examples of how these could apply to various life situations and one’s personal Hatha yoga practice. The session's core entailed practising

postures for the specific sequence. Sessions concluded with a shortened version of the Yoga Nidra practice to relax and refresh participants before returning to their work duties.

Postures from sequences A and B were combined during the final four weeks of the programme. The aim of presenting the intervention in this way was to teach and reinforce all the techniques and enable participants to continue practising the learned sequences on their own after the intervention. They were provided with the lesson plans of the poses in the sequences in the programme manual to aid and support the continuation of personal practice. Teaching the programme in progressive stages was in line with the importance of timing and activity variety, which is conducive to promoting positive habits favourable for achieving sustained well-being through intentional activity (Lyubomirsky et al., 2005).

The physical yoga sessions were implemented by applying the four wellness facilitators on a bi-weekly rotation basis (see Appendix B). A replacement was arranged whenever a facilitator could not present their sessions. Using a team to implement the intervention also served as a measure to minimise the threat to the study's external validity (Gravetter & Forzano, 2009; Pandey & Patnaik, 2014). The facilitators were guided by a teacher's manual designed by the researcher. The manual outlined core components to focus on in each session to aid uniformity in implementation (Gould et al., 2014). Before the start of the programme, the facilitators underwent a training session. The programme's structure and the study's main aim, the purpose of the physical yoga sessions, and the focus on progressive developments were discussed. The physical sequences were outlined, and all the postures were covered to ensure everyone felt confident and comfortable presenting the sequences.

The wellness facilitators were urged to encourage participants continuously to continue with the programme to counter fall-out and reduce attrition. Daily reminders of the physical yoga practice sessions were sent out via e-mail to inform participants what would be

covered on a particular day. Participants were asked to inform the researcher if they could not attend a session for any reason so that their apology could be documented. Documenting apologies was necessary to gain information on participant commitment and reasons for missed sessions that could shed light on the feasibility of the intervention. A WhatsApp group was formed for interested participants who could communicate via e-mail or WhatsApp. The different data collection processes are described in detail next.

4.6 Data Collection Procedures and Measures

As described in Section 4.2.1, the research utilised an equal status, hybrid type concurrent mixed methods design that applied both quantitative and qualitative techniques. The quantitative strand was primarily utilised to explore the effects of the intervention on mental health, emotions, work engagement, and perceived stress. The qualitative strand served primarily to explore participants' perceptions and experiences of using a yoga-based PPI to promote their sense of well-being and to shed light on the value and feasibility of the programme. Supplementary information that could illuminate deeper insights into the effectiveness and feasibility of the 36-week yoga-based PPI was also collected throughout the intervention phase.

Questionnaires and interviews were utilised as the primary data collection tools. These are common research instruments used in mixed methods designs. Some argue that using different procedures for collecting data and obtaining information through different sources can augment the validity and reliability of the data and enhance the interpretation of study outcomes (Zohrabi, 2013). The different quantitative and qualitative data collection techniques and processes are described next to demonstrate how the different data sets were obtained. The data collection processes are described according to the types of data and supplementary information collected during the three main phases—the quantitative strand, the intervention, and the qualitative strand.

4.6.1 Procedures and Measures of the Quantitative Strand

A quasi-experimental, repeated measures, within-group design was applied to determine the extent to which the programme impacted the selected outcome variables (Gravetter & Forzano, 2009; Lyubomirsky et al., 2005; McBride et al., 2018; Meixner & Hathcoat, 2018). Participants were required to complete an electronic questionnaire at four time points (0 weeks, 18 weeks, 36 weeks, and 48 weeks). The baseline questionnaire was pilot tested before administering it to the study sample to ensure all the questions and response options (closed- and open-ended) were displayed properly, and the respondents' information was captured correctly into the Excel spreadsheet. Moreover, those who volunteered to complete the pilot test questionnaire (N = 13) were asked to indicate whether they had accessed the link on their phone or computer/laptop and how long it took them to complete it. This feedback was obtained to ensure that participants could use either device (phone or laptop/computer) to access the questionnaire, record their responses, and determine how long it would take them. The pilot test was successful, and no changes were necessary to the structure of the questionnaire.

The electronic questionnaires produced mainly quantitative data with supplementary open-ended responses, represented as [QUAN + qual] in the procedural diagram (Figure 4.1). Zohrabi (2013) explained that using open-ended questions in a questionnaire can lead to a deeper level of discovery as these responses more accurately reflect what the respondent wanted to say. Therefore, using both closed- and open-ended questions in a single questionnaire strengthens a study as the responses could complement each other.

In addition to biographical and other descriptive questions, a battery of freely accessible, validated measures were used to test the intervention's effects on mental health (measured with the Mental Health Continuum Short Form), emotions (measured with The International Positive and Negative Affect Schedule Short Form), work engagement

(measured with the Utrecht Work Engagement Scale), and perceived stress (measured with The Perceived Stress Scale). None of these measures appeared on the list of classified tests published by the Health Professions Council of South Africa (HPCSA). The measures are not diagnostic tools and were therefore suitable to be used by the researcher for research purposes.

Validated shortened versions of all measures were chosen to keep completion time to an absolute minimum in an attempt to avoid straining participants unnecessarily with completing a lengthy questionnaire. Taking cognisance of the amount of time available for completing research instruments is regarded as a good assessment practice (Griessel et al., 2009) and honours the ethical consideration of not causing participants unnecessary strain or inconvenience. Moreover, in a study by Page and Vella-Brodrick (2013) that evaluated a positive psychology-based employee well-being programme through a mixed method design, a low attrition rate was attributed to the lengthy survey participants were asked to complete repeatedly over an extended time. The requirement for a low attrition rate further motivated using the shortened versions of the selected measures.

The questionnaires were uploaded via Google Forms, and participants received links to complete these questionnaires at four different time points. Responses were automatically captured into a password-protected Excel spreadsheet, minimising research costs and data-capturing errors. The questions and measures included in the electronic questionnaires are described next.

4.6.1.1 Biographical Questionnaire.

Biographic questions were included in the baseline version to obtain demographic information on participants' sex, age, race, relationship status, education, job title and job level. Participants' e-mail addresses and staff numbers were gathered to serve as unique

identifiers to match their data collected at the different time points and other information sources (attendance registers and responses to the theoretical lessons).

Participants were also asked to specify which campus they were situated on (on-site or off-site), if they were currently taking part in any of the existing employee wellness programme activities, or engaging in any regular physical or other activities (such as jogging or meditation). Moreover, they had to indicate whether they have practised yoga before and if they had any issues with blood pressure, the spine (including the neck), or conditions related to the heart since these conditions should be managed with care during a physical yoga practice.

The biographical information and the closed-ended descriptive questions were only asked once in the baseline questionnaire. The validated measures included in all follow-up versions of the questionnaires that produced the primary quantitative data to explore the programme's impact on the outcome variables are described next.

4.6.1.2 The Mental Health Continuum Short Form.

The Mental Health Continuum Short Form (MHC-SF) (Keyes, 2009) was used to explore how the programme impacted participants' mental health. This test is a validated 14-item scale (Lamers et al., 2011) that measures degrees of well-being (flourishing, moderate mental health, and languishing) in terms of a multidimensional construct comprising emotional, psychological, and social facets on a six-point Likert scale ranging from "never" to "every day" (never = 0 and everyday = 5) (Keyes, 2009). The shortened form was derived from the long version that consists of 40 items to comprise the most prototypical items representing the three factors. Emotional well-being is measured by three items (happy, interested in life, and satisfied), psychological well-being by six (self-acceptance, environmental mastery, positive relations with others, personal growth, autonomy, purpose in

life), and social well-being by five (social contribution, social integration, social actualisation, social acceptance, social coherence). A sample of the questions is as follows: During the past month, how often did you feel “happy” (emotional well-being), “that you had something to contribute to society” (social well-being), and “that you liked most parts of your personality” (psychological well-being).

Both continuous and categorical scoring are recommended for the MHC-SF (Keyes et al., 2008). Continuous scoring is determined by calculating the sum of each sub-scale and the total scale. Scoring ranges for the three sub-scales are as follows: emotional well-being, 0 to 15; social well-being, 0 to 25; psychological well-being, 0 to 30. Overall scores can range from a minimum of zero to a maximum of 70, with higher scores indicating better mental health. This study used the overall score and individual scale constructs to explore how the intervention impacted participants’ mental health. No categorical diagnosis was made to measure participants’ degrees of well-being.

The scale has demonstrated excellent internal reliability (> 0.8) and moderate test-retest reliability; 0.68 at three months and 0.65 at nine months in previous studies (Keyes, 2009; Lamers et al., 2011). The MHC-SF has been validated in the South African context and yielded a relatively high internal consistency ($\alpha = 0.74$) (Keyes et al., 2008). The current study yielded a good reliability score ($\alpha = 0.897$) for the overall scale in the baseline sample.

4.6.1.3 The International Positive and Negative Affect Schedule Short Form.

The International Positive and Negative Affect Schedule Short Form (I-PANAS-SF) (Thompson, 2007) was used to determine the intervention effect on participants’ emotions. This scale comprises ten items that measure positive and negative affect. The short form was developed from the original 20-item version (Watson et al., 1988), comprising five items that measure positive affect (alert, inspired, determined, attentive, active) and five items

measuring negative affect (upset, hostile, ashamed, nervous, afraid) on a five-point Likert scale ranging from “never” to “always” (never = 1 and always = 5). The sample question on the measure is as follows: “Indicate the extent you have felt this way over the past week”.

Scores for positive and negative affect are calculated separately by adding the scores of the five items for each. Scores for positive affect can range from a minimum of five to a maximum of 25 with higher scores representing higher levels of positive affect. Scores for negative affect also range from a minimum of five to a maximum of 25, with lower scores representing lower levels of negative affect.

The I-PANAS-SF has been deemed a valid, reliable, and efficient tool that is adequate for measuring positive and negative affect in brief cross-cultural research (Karim et al., 2011; Thompson, 2007). It has been used within the South African context with reported reliability scores of 0.86 for positive affect and 0.83 for negative affect in the study sample (Van Zyl & Rothmann, 2012). The current study yielded acceptable reliability scores for the baseline sample's positive ($\alpha = 0.734$) and negative affect ($\alpha = 0.609$) sub-scales.

4.6.1.4 The Utrecht Work Engagement Scale.

The levels of work engagement were measured with the nine-item version of the Utrecht Work Engagement Scale (UWES-9) (Schaufeli & Bakker, 2003). This version was derived from the original 17-item self-report questionnaire (Schaufeli & Bakker, 2003). The UWES is one of the most commonly used measures of work engagement (Field & Buitendach, 2011; Grant & McGhee, 2020; Knight et al., 2017). It measures work engagement in terms of three core aspects (vigour, dedication, and absorption) on a seven-point Likert scale ranging from “never” to “always” (never = 0 and always = 6) (Schaufeli & Bakker, 2003). Each of these aspects comprises three items. Examples of the questions

include: “At my work, I feel bursting with energy” (vigour), “I am enthusiastic about my job” (dedication), and “I am interested in my work” (absorption).

Sub-scales’ scoring is done by adding the scores in each sub-scale and then dividing the sum by the number of items in the sub-scale. The calculated sub-scale scores are added and divided by the number of sub-scales (three) to calculate the overall score. Scores can range from a minimum of zero to a maximum of six, with higher scores indicating greater vigour, dedication, and absorption for the respective sub-scales and work engagement for the overall scale (Schaufeli & Bakker, 2003).

Psychometric validation of the UWES-9 by de Bruin and Henn (2013) using a South African sample cast doubt on the discriminant validity of the three sub-scales within the shortened version. Their results instead pointed to a general factor with a Cronbach’s alpha value of 0.92 obtained for the total score. Based on these findings, they recommended that the total score for the UWES-9 be used instead of the separate sub-scale scores. However, results by Gorgens-Ekermans and Herbert (2013) supported the three-factor structure (CFI = 0.98) of the scale with a South African sample. The UWES-9 has been used by Geldenhuys et al. (2014) in the South African context, which reported acceptable reliability scores. They reported CFA-based reliability scores for latent variables, including the UWES-9, ranging between 0.69 and 0.95. Excellent reliability was found for the overall scale in the current study ($\alpha = 0.952$).

4.6.1.5 The Perceived Stress Scale.

Perceived stress as a negative (low) well-being indicator was measured with The Perceived Stress Scale (PSS) (Cohen et al., 1983). This self-report scale measures the degree to which general situations in a person’s life are appraised as stressful (Cohen et al., 1983). It

contains questions that relate to stressful life experiences in the past month (Hamad et al., 2008). The questions can be responded to on five-point Likert scale ranging from “never” to “very often” (never = 0 and very often = 4) with scores indicating the presence of minimal to very high levels of stress (Magalhaes Das Neves et al., 2014). Three versions of this scale, consisting of 14, 10, and four items, are the most widely used measures of stress (Ezzati et al., 2014). The 10-item version (PSS-10) was used in this study as it has demonstrated reliable internal consistency (0.82) whereas the four-item version did not (Ezzati et al., 2014).

The PSS-10 comprises two factors, a positive sub-scale of four items and a negative sub-scale of six items (Ezzati et al., 2014). A sample question from the positive sub-scale is, “In the last month, how often have you felt confident about your ability to handle your personal problems?” On the other hand, the question “In the last month, how often have you been upset because of something that happened unexpectedly?” is an item example from the negative sub-scale. The scores for the four items of the positive sub-scale are reversed before adding the scores for all 10 items to get the overall total to calculate the PPS score. Individual scores can range from a minimum of zero to a maximum of 40. Scores ranging from zero to 13 are classified as low stress, scores ranging from 14 to 26 as moderate stress, and scores between 27 and 40 as high stress.

The PSS-10 has been used with an adult sample within the local context with a reported Cronbach’s alpha value of 0.72 (Hamad et al., 2008). It has also been used specifically with a sample of working adults in the South African context (Magalhaes Das Neves et al., 2014). For the current study, a Cronbach’s alpha value of 0.758 was found in the baseline sample.

4.6.1.6 Descriptive Information.

Closed- and open-ended descriptive responses were also collected with the electronic questionnaires to gather supplementary data that could offer deeper insights into the value and feasibility of the programme to promote participants' perceived well-being. Unique open-ended responses were included in the different questionnaires relevant to each particular time point. For example, the baseline questionnaire included questions on participants' reasons for joining the programme and follow-up questions included in the 36-week questionnaire asked participants to describe if they thought yoga is a useful tool to promote well-being in the workplace and indicate any negative experiences or adverse effects they may have incurred from taking part in the programme (if at all). Questions included in the final post-intervention measure at 48 weeks asked participants to describe how (if at all) they continued to use the programme tools in their everyday lives and reflect on the value it added towards their sense of well-being.

Standard open-ended qualitative responses repeatedly included in all four versions of the questionnaires asked participants to note any significant events that occurred throughout the study which possibly impacted the scores of the various measures to account for possible historical effects posing threats to the internal validity of the study (Gravetter & Forzano, 2009). Participants had to indicate (yes/no) and describe if they had experienced any major life events/experiences (positive and/or negative) in the recent past (1-3 months) that might have impacted any of the measures completed in the questionnaire. Noting significant life events, such as graduating (positive experience) or experiencing an unexpected death of a loved one (negative experience), was important as these could likely impact the study variables in addition to the impact of the intervention.

The open-ended responses in the electronic questionnaires yielded supplementary qualitative data in the main quantitative strand, indicated as QUAN + qual, in the procedural

diagram (Figure 4.1). Other supplementary information that was collected throughout the intervention phase is discussed next.

4.6.2 Information Collected During the Intervention Phase

Additional sources of information gathered during the intervention phase comprised the attendance registers of the physical practice sessions, teacher feedback forms, and participants' responses to the theoretical lesson.

Participants signed an attendance register when attending the physical practice sessions. All apologies and reasons for missed sessions were documented. The researcher collected the attendance lists and captured them into an Excel spreadsheet for processing. This information offered insight into adherence patterns—which spoke to the feasibility aspect of the study. The information captured on attendance indicated whether participants attended a session, provided an apology, or were noted as absent. Details of participants joining the intervention late and those withdrawing throughout the study were also noted.

Wellness facilitators were required to submit feedback forms after each lesson. This enabled the researcher to monitor their adherence to the implementation guidelines. It was also useful for facilitators to keep track of the participants' progress throughout the programme—the feedback forms were shared amongst all the facilitators after each session. Facilitators had to reflect on their general teaching experience and noted any significant observations made of the participants (attendance, behaviour, feedback received, etc.).

Participants' responses to the 12 theoretical lessons were useful for tracking their adherence to this aspect of the intervention. Participants were asked to rate how well they felt they had managed to honour and apply each of the five yama and niyama principles in their everyday lives—based on a five-point Likert scale—and offer any additional reflections. However, this information was merely captured to track their compliance and encourage reflection.

4.6.3 Procedures and Measures of the Qualitative Strand

Understanding the reasons behind why happiness interventions work is still an underexplored research area (Lyubomirsky et al., 2011). “Big Q” qualitative data collection techniques, involving the exploration of lived experiences and participant-defined meanings (Willig, 2008), were used to gather information that could offer deeper insight into the processes underlying the feasibility of using a yoga intervention as a PPI tool in the context of a South African workplace by reflecting on participants’ experiences of their involvement in the programme.

In-depth face-to-face semi-structured interviews were conducted with a sub-sample of the participants after the conclusion of the programme (QUAL). The interviews took place at a time and place convenient for the participants during January and early February 2020, following the conclusion of the intervention in December 2019.

The researcher conducted the interviews. Participants were asked to permit voice recordings of the conversations for record-keeping purposes and accurate data analysis. As explained in the initial consent form participants submitted at the study's outset, they were again reminded that anonymity could not be maintained as participants comprised a small group and other employees were aware of their involvement in the yoga sessions. However, the confidentiality of the information they shared during the interview was ensured because it would not be directly traceable to any particular participant. Everyone acknowledged that they understood the terms and verbally consented to the recording of the interview (they had already voluntarily provided written consent to participate in the interviews in the initial consent form).

The interviews ranged between a maximum of 60 minutes and a minimum of 15 minutes. The interview schedule was structured to gather information on participants’ reasons and goals for joining the programme, their reflections on the value they gained in terms of

enhancing their well-being using the tools of the practical and theoretical components of the intervention, and their recommendations on how to enhance similar programmes in future (see Appendix C for the full interview schedule).

4.7 Data Analysis

As mentioned earlier, the quantitative and qualitative data obtained throughout the research process were analysed independently and integrated into the concluding discussion phase (McBride et al., 2018; Meixner & Hathcoat, 2018). The respective analysis techniques applied to the different data sets are described next. Information on data preparation (cleaning and verification) is also provided.

4.7.1 Quantitative Data Analysis

Data preparation entailed assigning numeric values to all responses, and reverse coding was done for the required items in the PSS-10. Mean imputation was used to deal with item non-responses found in the four measures—the cases where participants chose not to answer a particular question—a method commonly used in the Social Sciences (Durrant, 2005; Rässler & Riphahn, 2006). All scores for the individual scales and sub-scales were computed accordingly. As part of the data cleaning and verification process, basic statistics were calculated to determine if there were any errors or anomalies that needed investigation. Frequencies were calculated for nominal and ordinal variables, while means, minimum, and maximum values were calculated for continuous variables.

Reliability analysis was conducted on the data obtained from the pilot test to check the internal consistency of the four standardised scales used in the electronic questionnaire—this was done before the questionnaire went live. The Cronbach's alpha values were acceptable, ranging between 0.747 and 0.898 (Pallant, 2010).

The respective analyses applied to the quantitative data are described next. Analyses were conducted using Microsoft Excel and SPSS 27.

4.7.1.1 Descriptive Statistics.

Demographic data and other closed-ended questions were processed as frequencies and/or percentages. Frequencies and percentages were also calculated from the information collected through the attendance registers and responses to the theoretical lessons.

Descriptive statistics—frequencies, means, medians, standard deviations, and minimum and maximum values—were used to describe the characteristics of the samples obtained for each of the scales and sub-scales at each of the four data collection points (Time 1, baseline; Time 2, 18 weeks; Time 3, 16 weeks; Time 4, 48 weeks). An exploratory analysis was conducted on the baseline sample to understand the data better and determine the most appropriate techniques to apply in the repeated measure evaluations.

Two cases from the baseline sample ($N = 46$) were deemed invalid and consequently excluded from the subsequent analysis. These participants completed the baseline questionnaire after attending four and five physical practice sessions and were deemed invalid baseline cases. Participants who attended one or two sessions before completing the baseline questionnaire ($n = 8$) were included in the analysis. This decision was made to retain the maximum number of cases since the sample was already relatively small. Shapiro-Wilk significance values and exploratory graphs (histograms, scatter plots, and Q-Q plots) were explored to determine the normality distribution of the data. Due to the small sample size and non-normality of the majority of the variables, non-parametric alternatives were selected as most appropriate for the repeated measures analyses (Field, 2009).

4.7.1.2 Repeated Measures Analyses.

Both the Friedman and the Wilcoxon signed-rank tests were used to determine the effects of intervention participation on the outcome variables. The Friedman test was suitable for determining differences in indicators between the time points for participants who

provided data at all relevant times (Field, 2009; Pallant, 2010; Wassermann et al., 2019). Two scenarios were explored, times one to three and times one to four. Times one to three were used to determine the impact of programme participation from the start to the end of the intervention, and times one to four were used to determine if there were lasting effects after the intervention had ended. Because the Friedman test compares differences over time for the same group, only participants who provided data at all the respective times were included in the analyses (T1 to T3: $n = 18$; T1 to T4: $n = 12$). The disadvantage of this analysis is the exclusion of data points, resulting in a limited sample. However, the analysis accounts for statistical error incurred when drawing multiple comparisons and provides the most accurate indication of programme participation's impact on the outcome variables (Field, 2009; Pallant, 2010).

The Wilcoxon signed-rank test was applied to test for differences between groups at specific time points to explore further the effect of programme participation (Field, 2009; Pallant, 2010): time one and two, time two and three, time one and three, and time three and four. Separately testing the alternative pairs resulted in the inclusion of slightly larger samples (T1 x T2: $n = 28$; T2 x T3: $n = 18$; T1 x T3: $n = 19$; T3 x T4: $n = 12$). It should be noted that running multiple tests of individual pairs increases the likelihood of type one error—showing an effect in error leading to a false rejection of the null hypothesis (Field, 2009). Wilcoxon tests were conducted after the Friedman analyses to explore differences between slightly larger groups who completed measures at the individual time points further. Doing the additional Wilcoxon tests reduced the data points lost in the Friedman analysis and offered useful information on how intervention participation impacted the well-being indicators at the unique time points.

A significance level of .05, typically used in psychology (Field, 2009), was used throughout.

4.7.2 *Qualitative Data Analysis*

Different qualitative analysis techniques were required to analyse the text data produced from the interview transcripts, and the descriptive open-ended response gathered employing an electronic questionnaire. A reflexive thematic analysis was applied to the interview transcripts, and qualitative content analysis techniques were used to analyse other qualitative data.

4.7.2.1 Reflexive Thematic Analysis.

The rationale for the reflexive thematic analysis was to explore participants' perceptions and experiences of participating in the programme to shed light on the value and feasibility of using a yoga-based PPI in a work context to promote employees' sense of well-being. The semi-structured interviews produced the primary data of the qualitative strand. Interview recordings were transcribed and checked for accuracy against the audio records and all discrepancies were amended accordingly. All identifying information was anonymised to maintain the confidentiality of the information. For example, the different participants' identities were changed to Participant 1, Participant 2, et cetera, and the name of the HEI was mentioned as follows: (name of university). The ten interview transcripts comprised the data set for the thematic analysis.

The data were analysed according to Braun and Clarke's (2006) well-known method by which they referred to more recently as reflexive thematic analysis (Braun et al., 2018; Braun & Clarke, 2019). This approach is underpinned by a qualitative philosophy which emphasises the researcher's subjectivity as a resource, qualifying meaning as contextual and reality as multiple. It was a suitable analytic method which offered the necessary flexibility to locate the analysis in the study's conceptual framework—as the method itself is independent of any particular theory and epistemology (Braun & Clarke, 2006; Braun et al., 2018). The

interpretivist notion that reality is multi-layered and influenced by individual perspectives and experiences informed the analytic approach—the researcher attempted to understand how the participants perceived their experience of using the programme to enhance their sense of well-being (Mackenzie & Knipe, 2006).

The reflexive thematic analysis process entailed the following six phases (Braun & Clarke, 2020): 1) familiarisation of the data and writing notes, 2) systematic coding of the data, 3) generating initial themes from the coded and collated data, 4) developing and reviewing themes, 5) refining, defining, and naming themes, and 6) reporting the findings. Applying this six-phase approach was more reflexive and recursive rather than strictly linear (Braun et al., 2018). The coding was conducted using computer-based qualitative data analysis software Atlas-ti 9. A detailed description of how the phases were carried out is provided next.

Phase 1: Familiarisation with the data and writing notes. After the transcripts were completed and quality assured, the familiarisation process began. The familiarisation entailed appreciating data *as* data and becoming immersed in it (Braun et al., 2018). Unique and interesting aspects of the data were noted while listening to the audio recordings and reading the transcripts several times. Connections were drawn between what the different participants said, and further connections between the data and existing literature were made (Braun et al., 2018). The analysis was guided by the second research question: What are employees' perceptions and experiences of using a yoga-based PPI to promote their well-being? This question aimed to provide insights into the value and feasibility of using the intervention to enhance employee well-being. With this in mind, data were explored in-depth to provide a good overall grasp of the content and to inform initial insights before the coding process.

Phase 2: Systematic coding of the data. After the familiarisation phase, codes were applied to pieces of text to identify meaning throughout the data set. This coding was done

inductively with the research question in mind (Braun & Clarke, 2006). Inductive coding entails identifying what is within the data rather than searching for pre-determined concepts and information—what is considered a deductive approach. When coding inductively, the starting point of the analysis is *with* the data rather than existing theories or concepts (Braun et al., 2018).

Moreover, the meaning was identified and coded for on semantic and latent levels (Braun et al., 2018). Semantic codes capture explicit meaning close to participants' language without interpretation—for example, coding *"I also have a problem with my back"* as "Health Issues". Latent coding is a more abstract and implicit interpretive approach to coding. For latent coding, the meaning was looked for beyond the obvious or surface level of what participants said. Interpretations were made through the researcher's unique lens while drawing from personal experience gathered throughout the wellness programme implementation. For example, the following extract was coded as "Inspiring positive change": *"I wish my colleagues that started could make it through to the end. Some of them didn't go through the programme. And I spoke to another lady the other day; now she's very—she regretted that she stopped it. Yah. Because she said she's looking at us, and she can see there is a difference"*. The extract demonstrates how some non-participating employees were inspired by the changes they observed in those participating in the programme.

Following Braun and Clark's (2006) advice, as many codes as possible were applied to pieces of text while including contextual information to keep the codes in context. If a piece of text ascribed to multiple implicit meanings, all relevant descriptive code labels were applied to it. The following extract was coded as "Accommodating everyone" and "A positive workplace experience", for example: *"It was from a manager's side to my colleagues working with administration. And also that we are in this together and how we*

enjoy it.” It demonstrates that the programme was not just for an exclusive group but for anyone interested in participating and that enjoying the programmes provided a positive workplace experience. Once all the codes were identified, these were checked by the study promoters—serving as a credibility check, part of the quality assurance measure (Willig, 2008).

Phase 3: Generating initial themes from the coded and collated data. Next, the codes were explored and organised into initial or candidate themes. Meaning-based patterns were identified to group codes into themes and sub-themes that could convey insights into the value and feasibility of using the wellness programme to promote employee well-being (Braun et al., 2018). Any incoherence between codes and associated text was revised at this stage. Each theme had to be unique and contain one organising idea that captured a meaningful pattern across the data set (Braun et al., 2018). The deliberations on this step and the associated discrepancies were also discussed with the promoters until a consensus was reached.

Phase 4: Developing and reviewing themes. Developing candidate themes informed preliminary possibilities of the story that could be told from the data. All the initial themes and sub-themes were revised to ensure that all the codes under the themes accurately reflected the meaning of the relevant theme or sub-theme (Braun et al., 2018). All necessary adjustments were made. Next, the validity of the themes and sub-themes was considered and whether the candidate themes reflected the meanings evident in the overall data set (Braun & Clarke, 2006). This entailed another reading of the entire data set to ascertain if the meaning represented by the themes worked with the overall data set. Any additional data within themes overlooked in the earlier coding phase were coded at this stage (Braun & Clarke, 2006). Once the researcher felt that all codes were included under the candidate themes and the themes were unique in their meaning, the process moved on to the next phase.

Phase 5: Refining, defining, and naming themes. During this phase, the themes were defined and named to reflect the meaning each represented in the best way possible. Whether these theme names were concise enough to give the reader a good sense of what each entailed and what the themes conveyed about the value and feasibility of the intervention to promote employee well-being had to be considered (Braun & Clarke, 2006; Braun et al., 2018). Themes had to be distinct, internally coherent, and consistent (Braun & Clarke, 2006). The theme names and contents were checked by the study promoters and differences were deliberated until consensus was reached. Themes were amended accordingly.

Phase 6: Reporting the findings. Writing up the analytic narrative served as the final test of how well the themes worked—individually and with the complete data set. The research question, the list of codes, and the theme definitions were all revisited to ensure that the final themes adequately answered the research question (Braun et al., 2018). The final decision on whether the order of the themes conveyed a logical story was also made. Extracts were embedded in the narrative to help convey the main story told from the data. While being guided by the assumptions of the assumed epistemological position, the researcher presented an argument in terms of the value and feasibility of using a yoga-based PPI in a workplace setting to promote employee well-being based on her understanding of the shared experiences provided by the participants (Braun et al., 2018).

4.7.2.2 Qualitative Content Analysis.

Additional qualitative data—obtained from the open-ended responses in the electronic questionnaires—were subjected to qualitative content analysis. Content analysis within a qualitative paradigm is more than simply counting codes—as opposed to a quantitative paradigm. Instead, it entails a value-based process characterised by multiple realities, the mutual creation of data, and the development of individual and multifaceted perceptions of

phenomena co-created between the researcher and participants, and it is more interpretive (Graneheim et al., 2017). The purpose of the qualitative content analysis was to systematically reduce and categorise the data into meaningful units that could be used to validate the findings of the thematic analysis.

The procedural steps applied in the qualitative content analyses were as described below. Responses to particular open-ended questions were coded inductively. These included participants' reasons for joining the programme, descriptions of negative events participants experienced that they thought might have impacted their responses to the quantitative measures, and post-intervention reflections on the value of using the programme tools in everyday life. Coding was mainly semantic and, to a lesser degree, latent. Once all the information for the particular question was coded, the codes were grouped into meaningful and logical categories and sub-categories to organise the information related to the specific questions that generated the coded data (Graneheim et al., 2017). The study promoters checked all coding and classifications to ensure levels of abstraction and degrees of interpretation logic and congruence were maintained (Graneheim et al., 2017). All differences were deliberated on and amended as necessary until a consensus was reached.

These findings were triangulated with the main quantitative and qualitative analyses, which allowed further inferences to be made (Stemler, 2000). It also served as an attempt to reduce the effects of investigator bias and account for the possible effects of extraneous variables (Gravetter & Forzano, 2009; Gunawan, 2015; Shenton, 2004).

4.8 Research Rigour

Findings from well-constructed, academically sound research are essential to inform evidence-based practices of workplace PPIs in the South African HEI context that could hold application value for stakeholders (Heale & Twycross, 2015). Reflecting on the criteria of rigour is important as it informs readers' assessment of the study and stakeholders' decisions

of whether to draw on any findings to inform future workplace PPIs (Heale & Twycross, 2015). Measures taken to ensure research rigour through the mixed method design are described first, followed by the criteria for establishing rigour in qualitative research.

4.8.1 Evidence of Methodological Rigour

In their methodological review, Brown et al. (2015) highlighted guidelines that inform good reporting on a mixed methods study—similar issues were echoed by Guest (2013) as well as Meixner and Hathcoat (2018) for appraising quality in mixed methods studies. The use of a mixed methods design as the best means to answer the research question/s should be well justified, and the method should be described in great detail—for example, design sequencing, sampling methods, data collection, analysis and integration. Moreover, the limitations of one method over the other should be described, and insights gained from mixing methods should be highlighted (Brown et al., 2015). Evidence of what was done in the current study to ensure scientific rigour is highlighted again in this section to aid the reader in making an informed decision on the soundness of the study outcomes and conclusions (Brown et al., 2015; Zohrabi, 2013).

It was argued that the many uncertainties inherent in the “real-world” context—such as the initial interest in the programme, participant commitment, adherence, and attrition—would be best navigated by a mixed methods design which allows for one method to address the shortfall of another (Brown et al., 2015). Qualitative findings facilitated a deepened understanding of the quantitative, and quantitative results were used to cross-reference conclusions drawn from the qualitative data to produce a more complete picture and reduce possible effects of social desirability bias of those participants who took part in the interviews (Barns, 2019; McBride et al., 2018). The hybrid design type and data integration were clearly described and visually depicted by a procedural diagram to facilitate the reader’s understanding of the design sequencing. Sampling, data collection, and analysis methods of

both quantitative and qualitative strands and data sets were described in detail and insights gained from mixing the particular methods were reflected upon.

Addressing a research problem by collecting several different types of data from different sources is considered a good practice that can enhance a study's validity (Guest, 2013). The different qualitative and quantitative data sets—collected throughout the research process—were analysed separately and triangulated in the concluding discussion to provide meaningful findings and served as a data validation strategy to support the trustworthiness of the reported findings (Creswell, 2014; Shenton, 2004).

Regarding measuring the outcome variables; established, standardised scales were used, which have been deemed valid and reliable in other studies and were discussed in the relevant sections under Section 4.6.1. Cronbach's alpha values—commonly used to determine an instrument's internal consistency—reported for the measures in the current study were all acceptable with values above 0.7 (Heale & Twycross, 2015), except for the PANAS negative affect sub-scale ($\alpha = 0.609$).

Offering detailed descriptions of the entire research process would enable the study's replicability. At the same time, the teacher feedback forms helped the researcher to monitor and ensure consistency in terms of programme implementation among the different facilitators. Although the small sample size does not allow for the generalisability of the results, the detailed description of the sample's characteristics can inform the transferability of the findings to other contexts.

4.8.2 Evidence of Qualitative Rigour

Qualitative research is commonly criticised for lacking scientific rigour (Gunawan, 2015; Noble & Smith, 2015; Shenton, 2004). Therefore, a detailed description of the measures taken to confirm the trustworthiness of the qualitative findings is provided. Four

commonly accepted criteria—credibility, transferability, confirmability, and dependability (Gunawan, 2015; Shenton, 2004)—were considered.

Demonstrating the degree of congruence between the findings and the reality of the phenomenon under study is required to address the credibility criterion (Shenton, 2004). Appropriate, well-established data collection (semi-structured interviews and open-ended questions in the electronic questionnaire) and analyses techniques (thematic and qualitative content analysis) were used to provide deeper insights and understanding of the value of the intervention and what role it played in promoting participants' sense of well-being (Kim et al., 2017; Zohrabi, 2013). A research diary was kept in which research activities, processes, and reflections were documented—this helped to ensure an accurate write-up of the research process and aid researcher reflexivity. Study promoters' inputs were continuously sought during the various stages of the qualitative analyses, and an additional researcher conducted an independent thematic analysis used as a comparison.

Transferability is the extent to which the findings can be applied to other contexts (Noble & Smith, 2015) and can be equated with a kind of external validity (Gunawan, 2015). Detailed information on the study context and sample was provided to allow for comparison to other populations and contexts where the findings might have application value. Rich descriptions were given to further aid viable comparisons, using quotations from interviewed participants in the findings section, which gave the reader a proper understanding of the context and phenomenon under study (Shenton, 2004).

The confirmability criterion is honoured by demonstrating that the research findings emerged from the collected data and that participants' ideas and experiences were honoured over the researcher's personal preferences (Shenton, 2004). This approach was promoted by triangulating data to minimise the effects of investigator bias and to document an audit trail showing how the qualitative findings were constructed from the data.

Sufficient detail of the research method and the various aspects of the study—programme implementation, data collection and analysis—were provided to enable replication of the study and address the dependability criteria (Shenton, 2004).

4.9 Ethical Considerations

The research was conducted in line with general ethical guidelines for health researchers as prescribed by the HPCSA since the researcher is registered under the Health Professions Act, 1974, in the Research Psychologist category (HPCSA, 2008).

In adhering to the ethical principle of *best interest or well-being*, the researcher ascribed to non-maleficence and beneficence (HPCSA, 2008). The research was conducted to minimise harm to participants while ensuring that the potential benefits outweighed the potential risk. Participants had to sign and submit an indemnity form before participating in the physical yoga practice session. It was explained that they shared the responsibility to follow instructions provided in the sessions carefully and honour their bodies' limits and capacity. They were also asked to inform the wellness facilitators of any issues or concerns they experienced in their practice to get the necessary guidance tailored to their particular needs.

Moreover, qualified and experienced yoga teachers presented the physical component, and the message to be gentle and kind in practice was continuously reinforced. Because the teaching relationship is based on this mutual responsibility of teacher and practitioner, signing the indemnity form relieved the teachers, researcher, and institution of any legal obligation in the unforeseen event of an accident or injury. However, yoga is considered a low-impact physical activity which is safe to practice when taught according to the practice principles previously outlined. Physical yoga practice is associated with few adverse effects and low associated risk when taught by a responsible, qualified yoga teacher (Tzoneva, 2017). All the wellness facilitators were briefed on measures to take in the event of an

accident, serious injury, or emergency during the yoga sessions. These proposed actions were in line with the regular Occupational Health and Safety procedures obtained from the institutional gatekeepers. No incidents were experienced during the intervention. The consent form indicated that any of the study participants feeling a need to obtain psychological counselling due to experiencing psychological distress or discomfort as a result of their participation in the research could contact the researcher, and would be referred to appropriate professionals identified by the institute's employee assistance programme. No such requests were received.

In adhering to the principle of *respect for persons*, autonomy and confidentiality were honoured. It was made clear that participants were free to participate in the research based on full informed consent and had the right to withdraw from the research at any given time without negative consequences or providing any reasons for their withdrawal. The consent form also stipulated that data would be kept confidential and information was to be reported and published in a group format. However, due to the nature of the intervention, it was likely that the participants' identities were known amongst other employees, but all reporting would be done in a group format and under pseudo identifiers to ensure specific information would not be traceable to individual participants. Because complete anonymity could not be assured, participants were encouraged not to share or report highly sensitive information they wished to keep personal. Research data were stored electronically on a password-protected computer, and all electronic data collected by the online questionnaire were password protected. The research assistants appointed to transcribe the interview recordings signed confidentiality forms and were asked to keep the information confidential. After submitting the completed transcripts, they were requested to delete all files associated with the research they had in their possession, and they confirmed this via e-mail.

Considering the principle of *justice*, the programme was of such a nature that participants took something away after the completion of the intervention. The participants were taught a self-practice yoga sequence which they could continue after the conclusion of the intervention. All theoretical lessons, along with the physical posture sequence, were compiled into a course manual and provided to participants after the completion of the research activities. Official research activities only commenced after receiving ethical clearance and all the necessary permission from the concerned parties, such as the gatekeepers at the target site. Ethical clearance for the study was obtained from The University of South Africa College of Human Sciences Research Ethics Committee (2018-CHS-0221). The research was conducted with acceptable scientific rigour to ensure the integrity of the research findings and viable evidence-based value-add of the outcomes.

4.10 Chapter Summary

This chapter provided a detailed description of the research methodology and breakdown of the various steps taken to implement the study—from the design structure of the mixed methods design, the preparation for the fieldwork, implementation of the intervention, collection, and finally, the analysis of the quantitative and qualitative data. Research rigour and ethical consideration was taken during the process were also discussed. Offering sufficient detail of the study's design and how the project was carried out was essential to enable future researchers to replicate the research.

Next, we are taking another step closer to discovering the effectiveness and feasibility of using a yoga-based PPI to promote employees' sense of well-being. The results from the quantitative analyses are presented next.

5 Chapter Five: Quantitative Results and Discussion

This chapter presents the results of the analyses conducted on data gathered during the main quantitative strand and the intervention phase. It entails descriptive analyses of closed-ended questions and outcome variables in the electronic questionnaires, and the supplementary quantitative information collected during the intervention phase. Results from the repeated measures analyses is followed by a discussion of the outcomes in light of existing literature.

The research aim was to explore and describe the efficacy and feasibility of using yoga as a tool for a workplace PPI targeted at promoting employee well-being. The main quantitative strand was a quasi-experimental, repeated measures design primarily directed at addressing the first research question: What are the effects of a yoga-based PPI on mental health, work engagement, emotions, and perceived stress among participating employees? Both positive and negative indicators were distinguished to explore the intervention's effects. The following positive indicators were considered: mental health in terms of emotional, psychological, and social well-being; work engagement and related aspects, including vigour, dedication, and absorption; and positive emotions measured as positive affect. Negative indicators comprised negative emotions, represented as negative affect and perceived stress. The hypotheses were as follows:

- H₁: Participation in the programme will enhance positive indicators.
 - Mental health - H_{1a}: Participation in the programme will improve all aspects of mental health.
 - Work engagement – H_{1b}: Participation in the programme will enhance work engagement and related aspects.

- Emotions – H_{1c}: Participation in the programme will elevate positive affect.
- H₂: Participation in the programme will decrease measured levels of negative indicators.
 - Emotions – H_{2a}: Participation in the programme will reduce negative affect.
 - Perceived stress – H_{2b}: Participation in the programme will decrease levels of perceived stress.
- Null hypothesis – H_{0a}: Participation in the programme will not affect any positive indicators (mental health, work engagement or positive affect).
- Null hypothesis – H_{0b}: Participation in the programme will not affect either of the negative indicators (negative affect or perceived stress).

The intervention effect on the outcome variables was explored using the standardised measures discussed in chapter four, which were administered at the four specific time points: Time one (T1), baseline; Time two (T2), intervention mid-point at 18 weeks; Time three (T3), intervention conclusion at 36 weeks; and Time four (T4), post-intervention measured at 48 weeks, 12 weeks after the intervention had ended. The effectiveness and feasibility of using a yoga-based PPI to promote employee well-being were further explored using descriptive questions included in the electronic questionnaire at different time points. Analyses of data collected on session attendance and responses to the theoretical lessons were also done. The results from the respective analyses are presented next.

5.1 Results

The quantitative analysis comprised different forms of descriptive statistics and the repeated measures analyses.

5.1.1 Descriptive Statistics

Frequencies and percentages are reported for adherence patterns for both the physical and theoretical programme components and for the supplementary descriptive information obtained from the electronic questionnaires. Descriptive statistics, including the mean, median, standard deviation, and minimum and maximum values, were obtained to describe the outcome variables and test the normality assumption.

5.1.1.1 Session Attendance and Adherence to the Theoretical Component.

A rudimentary analysis of attendance data and responses to the theoretical lessons provided useful information concerning participants' adherence to the practical and theoretical programme components. These adherence patterns inform the question concerning the programme's feasibility and strengthen the credibility of the outcomes through triangulation with the qualitative findings (McBride et al., 2018; Shenton, 2004). Attendance trends for the physical yoga sessions are provided first, followed by information on adherence to the theoretical lessons.

Of the 72 sessions scheduled over the 36-week intervention period, 64 sessions were actualised—eight were cancelled for various reasons (e.g. student and staff protests). Appendix D illustrates the attendance trends for all 64 actualised sessions over the 36-week implementation period. An erratic trend with a decline from intervention start to end is displayed. From the possible 100% attendance that could have been achieved if all 46 participants attended all 64 of the actualised sessions, an overall headcount of 31% (902 of the possible 2 944) was reached. Out of this 31%, attendance during the first half of the programme (weeks 1-18; 61%) was higher than the second half (weeks 19-36; 39%). The maximum number of attendees per session—consisting of two separate slots—was 27

(session 9 in week 5), while the minimum was two (session 72 in week 36). The overall average attendance per session was 13 (six to seven per slot).

As described in chapter four, participants were noted for attending a session, offering an apology, or being absent. The number of sessions missed due to participants starting the programme late or discontinuing during the course of the programme was also documented. Considering all these factors, commitment and adherence were determined in terms of participants' actual attendance of the physical sessions and accounting for apologies offered for missed sessions (see Table 5.1). Considering apologies provides a more accurate picture of participants' commitment—as they sometimes wanted to attend but were unable to. Table 5.1 shows that the majority of the participants attended less than 50% of the physical yoga sessions. When looking at the actual attendance and accounting for apologies provided over the three categories, the table demonstrates that those who attended $\geq 50\%$ of the sessions were most likely to offer an apology when unable to attend a session—reflecting a greater commitment amongst the regular attendees.

Table 5.1

Adherence Patterns for Physical Yoga Sessions

< 10%		10 - 49%		$\geq 50\%$	
n	%	n	%	n	%
Actual attendance (adherence)					
13	28,3	20	43,4	13	28,3
Actual attendance and apologies (commitment)					
11	23,9	19	41,3	16	34,8

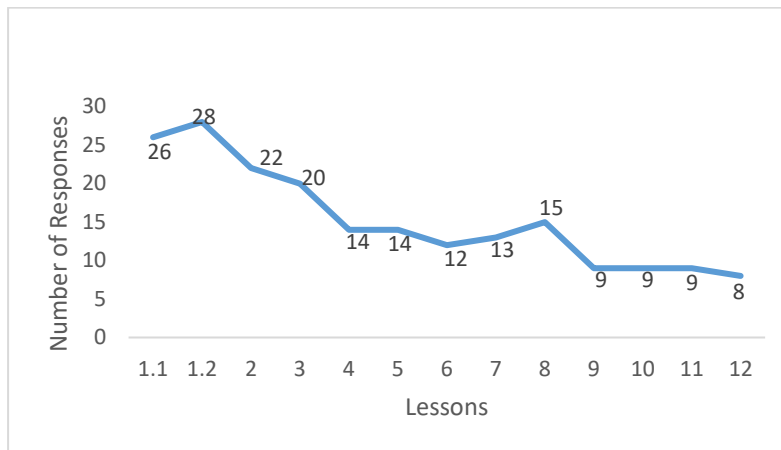
Note: Calculations based on the baseline sample (N = 46).

Adherence to the theoretical component is displayed in Figure 5.1. It demonstrates a distinct decline in response rates to the lessons over the course of the intervention period.

Adherence was highest during weeks one to eight (lessons one to three) and lowest during weeks 26 to 36 (lessons nine to 12).

Figure 5.1

Response Rates to Theoretical Lessons



Note: Calculations based on the baseline sample (N = 46)

As described in the research methodology chapter, supplementary descriptive information was also collected through the electronic questionnaire—completed at four time points—to help deepen understanding and interpretation of the study outcomes. A basic analysis of these responses is provided next.

5.1.1.2 Descriptive Information.

Descriptive information collected through the electronic questionnaire entailed a standard question included in all four of the time points, as well as unique questions suitable for specific times—T3 at the completion of the intervention (36 weeks), and T4 during the post-intervention period (48 weeks). An analysis of the standard question included in all four questionnaires is presented first, followed by an analysis of questions included in the 36- and 48-week questionnaires, respectively.

Participants were asked to indicate if they had experienced any significant events (positive and/or negative) in the recent past that possibly impacted their responses to the

measures of the outcome variables. Table 5.2 shows that the majority of participants at each of the four time points indicated that they had experienced significant events that possibly impacted their responses to the standardised measures. The highest portions are reported for time two (65.52%) and time three (63.16%), respectively.

Table 5.2

Significant Life Events Experienced that Possibly Impacted the Completion of the Questionnaires

Response	Time 1		Time 2		Time 3		Time 4	
	n	%	n	%	n	%	n	%
Yes	27	61,36%	19	65,52%	12	63,16%	7	53,85%
No	17	38,64%	10	34,48%	7	36,84%	6	46,15%

Note. Time 1, N = 44; Time 2, N = 29; Time 3, N = 19; Time 4, N = 13.

At the 36-week time period—T3, marking the conclusion of the intervention—participants were asked to indicate if they had experienced any adverse effects from their involvement in the programme and if they felt yoga was something they enjoyed enough to continue practising after the intervention had ended.

Table 5.3

Adverse Effects Incurred from Programme Participation

Response	n	%
Yes	3	15,79%
No	13	68,42%
Missing	3	15,79%

Note. Time 3, N = 19.

Table 5.3 indicates that overall (n = 13; 68.42%), participants reported incurring no adverse effects from participating in the programme. The few adverse effects reported (n = 3; 15.79%) were described as receiving negative comments from supervisors for attending sessions, discomfort experienced due to unfamiliarity with the exercises (physical component), and becoming aware of previously undiscovered/unknown aspects of the self

(theoretical component). All participants (n = 19; 100%) felt that yoga was something they enjoyed enough to continue after the 36-week programme had ended.

At 12 weeks post-intervention (T4), participants were asked to indicate whether or not they were still using some of the programme's wellness tools in their everyday lives. All (n = 13; 100%) indicated that they had continued to use some of the programme tools after the intervention had ended. Table 5.4 displays that most were using breathing exercises (31.58%). Other tools reported included mindfulness meditation, running, walking, and stretching exercises.

Table 5.4

Tools Used Post-intervention

Tools	n	%
Breathing exercises	12	31,58%
Yoga postures	9	23,68%
Yoga Nidra (relaxation)	8	21,05%
Theoretical lessons	6	15,79%
Other	3	7,89%

Note. Time 4, N = 13.

Descriptive statistics for the outcome variables as measured by the standardised questionnaires and results for normality testing, are reported next.

5.1.1.3 Outcome Variables.

Means, medians, standard deviations, and minimum and maximum values were obtained for all variables represented by the different scales and sub-scales. These descriptive statistics are presented in Table 5.5.

Table 5.5*Descriptive Statistics of the Scales and Sub-scales at each Data Collection Point*

Variable	Time 1					Time 2					Time 3					Time 4				
	M	Mdn	SD	Min.	Max.	M	Mdn	SD	Min.	Max.	M	Mdn	SD	Min.	Max.	M	Mdn	SD	Min.	Max.
MHC-SF Overall	46,19	46,00	12,25	19	69	51,28	52,42	11,29	26	66	53,51	55,00	9,23	33	69	48,48	52,00	12,21	22	61
MHC-SF EWB Sub-scale	10,50	11,00	3,00	3	15	11,90	12,00	2,45	4	15	12,80	13,00	1,73	9	15	11,31	12,00	2,90	5	15
MHC-SF PWB Sub-scale	21,99	22,00	5,81	9	30	23,01	24,25	5,71	9	30	24,21	25,00	4,47	11	30	22,46	25,00	5,01	11	28
MHC-SF SWB Sub-scale	13,71	15,00	5,50	2	24	16,38	17,00	5,08	6	25	16,50	17,00	4,13	9	24	14,71	17,00	5,61	5	23
UWES Overall	4,04	4,33	1,49	1	6	4,56	4,75	0,98	3	6	4,79	4,89	0,64	4	6	4,72	4,56	1,05	3	6
UWES Vigour Sub-scale	3,81	3,91	1,40	0	6	4,32	4,33	1,14	3	6	4,56	4,67	0,86	3	6	4,44	4,33	1,36	2	6
UWES Dedication Sub-scale	4,15	4,67	1,79	0	6	4,60	4,49	1,07	3	6	4,95	5,00	0,88	3	6	4,77	4,67	1,17	3	6
UWES Absorption Sub-scale	4,14	4,50	1,55	0	6	4,76	5,00	0,97	3	6	4,85	5,00	0,69	4	6	4,95	5,00	1,00	3	6
Positive Affect	17,21	17,50	4,16	8	25	18,93	20,00	3,95	12	25	19,26	21,00	5,25	5	25	18,62	20,00	4,29	9	24
Negative Affect	11,18	10,00	3,69	5	19	9,52	9,00	3,38	5	17	8,42	8,00	3,25	5	16	9,38	7,00	5,32	5	21
PSS-10	18,82	19,00	4,99	4	30	17,04	16,00	6,82	3	37	15,74	16,00	5,24	4	25	15,31	13,00	7,52	4	32

Note. Time 1, N = 44; Time 2, N = 29; Time 3, N = 19; Time 4, N = 13. MHC-SF = Mental Health Continuum Short Form; EWB = Emotional Well-being; PWB = Psychological Well-being; SWB = Social Well-being; UWES = Utrecht Work Engagement Scale; PSS = Perceived Stress Scale.

No out-of-range values were observed in minimum and maximum values for any of the variables (ranges were provided in Sections 4.6.1.2 to 4.6.1.4 in the previous chapter). The distribution of the scores is graphically presented with line graphs in Appendix E. In general, there was an increase in positive indicators from time one to three (intervention start to end) and a slight decline from time three to four (the post-intervention period), although, in some instances, the values plateaued at a certain point. In general, the values for negative indicators declined from time one to four. Due to outliers in the case of most of the variables, the median was regarded as a more accurate measure of central tendency (Field, 2009).

Data normality was explored to establish if the variables met this assumption required for using parametric tests (Field, 2009; Pallant, 2010). Significant values of the Shapiro-Wilk normality test were studied along with histograms, scatter plots, and Q-Q plots for each variable (Field, 2009). Based on the small sample size and violation of the normality assumption in the case of several variables, the decision was made to use non-parametric alternatives for the repeated measures analyses (Field, 2009; Pallant, 2010). See Appendix F and Appendix G for the detailed outputs of the normality testing. Since the non-parametric tests use ranks of scores instead of comparing means, these tests are not sensitive to outliers and are suitable for data that violates stringent parametric assumptions (Field, 2009). Results from the repeated measures analyses are presented next.

5.1.2 Repeated Measures

The repeated measures analyses aimed to investigate the effect of the intervention programme on the selected outcome variables. As hypothesised, it was expected that participation in the programme would enhance positive indicators (mental health, work engagement and positive affect) and decrease negative indicators (negative affect and perceived stress). Although the hypotheses were directional, two-tailed significance was

considered as fluctuation in the direction of the changes could occur between the different time points. Results from the Friedman and the Wilcoxon signed rank analyses are presented in the following sub-sections.

5.1.2.1 The Friedman Test.

Results for the first Friedman test conducted at times one to three—specifically to explore the effect of the intervention on all outcome variables from start to end—are displayed in Table 5.6. The results indicate that participation in the programme led to significant improvement in emotional well-being, as measured by the MHC-SF EWB sub-scale ($\chi^2(2) = 7.033, p < .05$), and the vigour aspect of work engagement, measured by the UWES Vigour sub-scale ($\chi^2(2) = 9.781, p < .05$). The Dunn-Bonferroni post hoc tests (Table 5.7) that were carried out to determine which time comparisons produced the significance, showed the significant increases occurred between times one and three in both instances ($p < .05$, after Bonferroni adjustments).

Significant reductions for negative affect ($\chi^2(2) = 7.651, p < .05$) and perceived stress ($\chi^2(2) = 12.030, p < .05$) are observed for negative indicators. The Dunn-Bonferroni post hoc tests indicated that the significance occurred between times one and three for negative affect and both times one and two, and one and three for perceived stress ($p < .05$ after Bonferroni adjustments).

Table 5.6

Friedman's Test for Intervention Start to End (Time One to Three)

Variable	<i>t</i>	<i>df</i>	<i>p</i>
MHC-SF Overall	3,915 ^a	2	0,141
MHC-SF EWB Sub-scale	7,033	2	0,030*
MHC-SF PWB Sub-scale	3,647 ^a	2	0,161
MHC-SF SWB Sub-scale	2,171 ^a	2	0,338
UWES Overall	3,970 ^a	2	0,137
UWES Vigour Sub-scale	9,781	2	0,008*

UWES Dedication Sub-scale	1,107 ^a	2	0,575
UWES Absorption Sub-scale	0,095 ^a	2	0,953
Positive Affect	5,403 ^a	2	0,067
Negative Affect	7,651	2	0,022*
PSS-10	12,030	2	0,002*

Note. n = 18. MHC-SF = Mental Health Continuum Short Form; EWB = Emotional Well-being; PWB = Psychological Well-being; SWB = Social Well-being; UWES = Utrecht Work Engagement Scale; PSS = Perceived Stress Scale.

^a. Multiple comparisons are not performed because the overall test retained the null hypothesis of no differences.

*p < .05.

Table 5.7

Dunn-Bonferroni Post Hoc Pairwise Comparisons

Variable	Time Pair	<i>t</i>	<i>Std. t</i>	<i>p</i>	<i>Adj. p^a</i>
MHC-SF EWB Sub-scale	T1 x T2	-0,361	-1,083	0,279	0,836
	T1 x T3	-0,806	-2,417	0,016	0,047*
	T2 x T3	-0,444	-1,333	0,182	0,547
UWES Vigour Sub-scale	T1 x T2	-0,611	-1,833	0,067	0,200
	T1 x T3	-0,972	-2,917	0,004	0,011*
	T2 x T3	-0,361	-1,083	0,279	0,836
Negative Affect	T1 x T2	0,389	1,167	0,243	0,730
	T1 x T3	0,861	2,583	0,010	0,029*
	T2 x T3	0,472	1,417	0,157	0,470
PSS-10	T1 x T2	0,139	0,417	0,677	1,000
	T1 x T3	1,028	3,083	0,002	0,006*
	T2 x T3	0,889	2,667	0,008	0,023*

Note. n = 18. SE = 0,333. Time 1 = T1; Time 2 = T2; Time 3 = T3; Time 4 = T4. MHC-SF = Mental Health Continuum Short Form; EWB = Emotional Well-being; PWB = Psychological Well-being; SWB = Social Well-being; UWES = Utrecht Work Engagement Scale; PSS = Perceived Stress Scale. Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

^a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

*p < .05.

Effect sizes were determined using Kendall's coefficient of concordance (Marshall & Marquier, n.d.). Effect sizes—interpreted according to Cohen's *d* guidelines of .10 (small), .30 (medium), and .50 (large effect) (Field, 2009; Marshall & Marquier, n.d.)—for emotional

well-being (Kendall's $W = 0.195$) and negative affect (Kendall's $W = 0.213$) were small, while effect sizes for the vigour aspect of work engagement (Kendall's $W = 0.272$) and perceived stress were moderate (Kendall's $W = 0.334$).

Results from the Friedman test conducted on times one to four, displayed in Table 5.8, show no significant difference was found for any of the variables. The results for the further analysis conducted with the Wilcoxon signed-rank test are provided next.

Table 5.8

Friedman's Test for Intervention Start to Post-intervention (Time One to Four)

Variable	<i>t</i>	<i>df</i>	<i>p</i>
MHC-SF Overall	5.718 ^a	3	0,126
MHC-SF EWB Sub-scale	3.716 ^a	3	0,294
MHC-SF PWB Sub-scale	1.259 ^a	3	0,739
MHC-SF SWB Sub-scale	5.353 ^a	3	0,148
UWES Overall	1.946 ^a	3	0,584
UWES Vigour Sub-scale	3.813 ^a	3	0,282
UWES Dedication Sub-scale	1.076 ^a	3	0,783
UWES Absorption Sub-scale	0.657 ^a	3	0,883
Positive Affect	3.106 ^a	3	0,376
Negative Affect	5.525 ^a	3	0,137
PSS-10	6.605 ^a	3	0,086

Note. $n = 12$. MHC-SF = Mental Health Continuum Short Form; EWB = Emotional Well-being; PWB = Psychological Well-being; SWB = Social Well-being; UWES = Utrecht Work Engagement Scale; PSS = Perceived Stress Scale.

^a. Multiple comparisons are not performed because the overall test retained the null hypothesis of no differences.

5.1.2.2 Wilcoxon Signed-Rank Test

Results from the Wilcoxon analysis, conducted to explore differences between groups at individual time pairs, are presented in Table 5.9. Effect size was calculated by dividing the z value by the square root of the number of observations over the two time points—i.e. $N \times 2$

in each time pair—and interpreted according to Cohen’s criteria of .1 representing small effect, .3 moderate effect, and .5 a large effect (Field, 2009; Pallant, 2010; Wassermann et al., 2019). The four indicators, each with its representing constructs, are reported on in turn.

Table 5.9

Wilcoxon Results Comparing Individual Time Pairs

Variable	T1 x T2 ^a		T2 x T3 ^b		T1 x T3 ^c		T3 x T4 ^d	
	<i>z</i>	<i>p</i>	<i>z</i>	<i>p</i>	<i>z</i>	<i>p</i>	<i>z</i>	<i>p</i>
Mental Health								
MHC-SF Overall	2,50	0,012*	1,13	0,257	2,11	0,035*	-2,10	0,036*
MHC-SF EWB Sub-scale	2,92	0,003*	2,44	0,015*	2,85	0,004*	-2,16	0,031*
MHC-SF PWB Sub-scale	2,00	0,046*	1,17	0,243	1,84	0,066	-0,77	0,439
MHC-SF SWB Sub-scale	1,98	0,047*	0,00	1,000	1,61	0,107	-1,18	0,237
Work Engagement								
UWES Overall	2,34	0,019*	0,78	0,434	1,44	0,150	0,32	0,753
UWES Vigour Sub-scale	2,91	0,004*	1,36	0,174	1,95	0,051	-0,18	0,857
UWES Dedication Sub-scale	1,43	0,153	1,23	0,218	1,36	0,174	0,26	0,796
UWES Absorption Sub-scale	1,68	0,094	-0,28	0,777	0,17	0,867	0,22	0,823
Emotions								
Positive Affect	2,45	0,014*	0,86	0,390	1,76	0,079	-0,12	0,906
Negative Affect	-2,90	0,004*	-1,52	0,129	-2,49	0,013*	0,99	0,325
Perceived Stress								
PSS-10	-2,66	0,008*	1,24	0,216	-2,75	0,006*	-0,51	0,607

Note: T1 = Time one; T2 = Time two; T3 = Time three; T4 = Time four; x = comparison.

^a n = 28. ^b n = 18. ^c n = 19. ^d n = 12. MHC-SF = Mental Health Continuum Short Form; EWB = Emotional Well-being; PWB = Psychological Well-being; SWB = Social Well-being; UWES = Utrecht Work Engagement Scale; PSS = Perceived Stress Scale.

* $p < .05$ (two-tailed).

For the mental health indicator, Table 5.9 shows a statistically significant increase for the overall construct (MHC-SF Overall) from time one to two ($z = 2.50$, $p < .50$; T1, Md = 46.00; T2, Md = 52.71), and from time one to three ($z = 2.11$, $p < .50$; T1, Md = 46.00; T3, Md = 55.00), but a significant drop from time three to four ($z = -2.10$, $p < .50$; T3, Md = 54.77; T4, Md = 52.00). In terms of effect size, both increases were moderate (T1-T2, $r = .33$; T1-T3, $r = .34$), and the decrease that occurred in the post-intervention period was also moderate (T3-T4, $r = -.34$).

Emotional well-being (MHC-SF EWB Sub-scale) was significantly impacted in all four time comparisons. It increased from the start of the intervention to the mid-way point at

18 weeks ($z = 2.92, p < .50$; T1, Md = 11.00; T2, Md = 12.00), from the mid-way point to the end of the intervention at 36 weeks ($z = 2.44, p < .50$; T2, Md = 12.00; T3, Md = 13.47), and also from the intervention start to end ($z = 2.85, p < .50$; T1, Md = 12.00; T3, Md = 13.00). A significant decrease was found between time three and four ($z = -2.16, p < .50$; T3, Md = 13.47.00; T4, Md = 12.00), from the end of the intervention to the three-month post-intervention measure. All effect size values were moderate (T1-T2, $r = .39$; T2-T3, $r = .41$, T1-T3, $r = .46$, T3-T4, $r = -.44$).

Psychological well-being (MHC-SF PWB Sub-scale) increased significantly from time one to two only ($z = 2.00, p < .50$; T1, Md = 20.00; T2, Md = 24.63) with a small effect size ($r = .27$).

Similarly, social well-being only increased significantly from time one to two (MHC-SF SWB: $z = 1.98, p < .50$; T1, Md = 14.89; T2, Md = 17.00), also with a small effect size ($r = .26$).

In terms of work engagement, a significant increase was found between time one and two for the overall scale (UWES Overall: $z = 2.34, p < .50$; T1, Md = 4.28; T2, Md = 4.60) with moderate effect ($r = .31$).

The vigour construct of work engagement showed a similar result. A significant increase was observed between time one and two (UWES Vigour Sub-scale: $z = 2.91, p < .50$; T1, Md = 3.74; T2, Md = 4.33), also with moderate effect ($r = .39$).

Table 5.9 shows some significance for the emotions indicator. Positive affect significantly increased from time one to two ($z = 2.45, p < .50$; T1, Md = 17.00; T2, Md = 19.00). Effect size calculation showed this increase was moderate in effect ($r = .33$).

The negative affect indicator shows significant decreases between time one and two ($z = -2.90, p < .50$; T1, Md = 10.50; T2, Md = 8.50) as well as between time one and three

($z = -2.49$, $p < .50$; T1, Md = 10.00; T3, Md = 8.00), both of moderate effect (T1-T2, $r = -.39$, T1-T3, $r = -.40$).

The second negative indicator, measured with the PSS-10, also produced two significant changes between time one and two ($z = -2.66$, $p < .50$; T1, Md = 19.50; T2, Md = 15.50) and time one and three ($z = -2.75$, $p < .50$; T1, Md = 20.00; T2, Md = 16.00). Both these observed decreases were moderate in effect as well (T1-T2, $r = -.36$, T1-T3, $r = -.45$).

The results reported for the repeated measures analyses demonstrate that participation in the intervention only impacted positive and negative indicators to some extent. In the next section, these results are discussed in more detail and considered in the context of existing literature.

5.2 Discussion

The main aim of the quantitative strand was to explore how participation in the 36-week yoga-based PPI would impact the identified well-being indicators, including mental health, work engagement, emotions, and perceived stress. Programme participation was expected to promote positive indicators (H₁) and reduce negative indicators (H₂). Results indicated that the yoga-based PPI promises to promote emotional well-being as well as energy levels and mental resilience while working and minimise the experiences of negative emotions and perceived stress. These results are considered in light of existing literature—drawing on various perspectives and other studies which investigated the promotion of well-being indicators—to offer insight into the value of using this specific type of yoga-based PPI in workplace settings to target employee wellness proactively. The intervention's effect on each related aspect is discussed in turn next.

5.2.1 *Mental Health*

Mental health (H_{1a}) is considered first. Results from the Friedman analysis showed that intervention participation had a small effect on the emotional well-being aspect of the

mental health indicator from the start of the programme to its conclusion after 36 weeks (T1-T3). This offers only partial support for hypothesis H_{1a} in that participation in the yoga-based PPI holds the potential to enhance mostly emotional well-being. The Wilcoxon results offer further support that participation in the intervention can promote aspects of mental health. All the mental health constructs improved significantly from the start of the intervention to the mid-point at 18 weeks in the Wilcoxon analysis (small to moderate effect). These findings are in line with previous studies which investigated the effects of yoga-based interventions on employee well-being indicators for the duration of six (de Bruin et al., 2020; Hartfiel et al., 2011) and 16 weeks (Harris et al., 2015; Maddux et al., 2017) respectively.

Contrary to these studies, Strijk et al. (2013) reported non-significant effects of a six-month wellness intervention on university employees—including a yoga group—on well-being indicators. Their secondary analysis showed that high compliance with the yoga sessions was required for significant effects. In line with this, high programme adherence and participant commitment over the first 18 weeks of the programme in the current study could explain the broader positive impact of mental health outcomes observed in the initial phase of the intervention (18 weeks) (Miglianico et al., 2019; Strijk et al., 2013). Moreover, programme participation impacted emotional well-being and overall mental health moderately over the 36 weeks (T1-T3), dropping moderately after the intervention ended (T3-T4). This outcome suggests that participation in this 36-week yoga intervention can enhance aspects of mental health—particularly emotional well-being—of those who stay committed to the programme. However, the enhancements appear to depend on continued participation and sustained efforts, as inferred from the significant decrease observed in the post-intervention period. This finding is supported by Salanova et al. (2013). This outcome contrasts with the study by Trent et al. (2019), which showed sustained long-term increases at

a two-month follow-up in psychological and occupational well-being among educational professionals following a three-day weekend, yoga-based wellness retreat.

It has been shown that flourishing mental health holds several benefits for well-being promotion. Evidence suggests it serves as a protective resource against threats to well-being—such as occupational stress—reduces the risk of developing mental illness, and improves the level of functioning in individuals with mental illness (Boshoff et al., 2014; Lamers et al., 2015; Ryff, 2014; Trompetter et al., 2017). In workplace contexts, subjective well-being can also serve as a positive driver for organisational outcomes (Diener et al., 2020), such as increased productivity (Keyes et al., 2000), and positively impact organisational citizenship behaviour and staff intention to leave (Moller & Rothmann, 2019). In the current study, various yoga-based tools—previously shown to enhance emotional, psychological, and social well-being (Woodyard, 2011)—were utilised to promote employee well-being. Regular practice of body postures (asana), relaxation (Yoga Nidra), and breathing exercises (pranayama)—which can help stabilise emotions by calming the mind and nervous system (Cahn et al., 2017; Desikachar, 1995)—hold the potential to impact emotional well-being positively (Hartfiel et al., 2011). The current study provides evidence for this in line with Salanova et al.'s (2013) notion that an individual-based yoga-based PPI offered in a workplace group setting can aid the building of resources conducive to emotional well-being. This result may benefit organisational outcomes such as work performance and social climate (De Longis et al., 2020), although the study by Harris et al. (2015) did not produce significant effects for their 16-week yoga intervention on the relational trust variable. In line with existing research (Alexander et al., 2015; de Bruin et al., 2020; Harris et al., 2015; Michishita et al., 2017), the current study provides evidence that offering a lunchtime yoga-based PPI can serve as a viable emotion regulation strategy to help employees replenish depleted energy levels during the workday and boost emotional states. Promoting personal resources (Harris

et al., 2015) in this way may enhance employees' quality of work life, which could impact life satisfaction favourably (Alrawadieh et al., 2020).

However, support for the successful long-term promotion of the psychological and social aspects of well-being by employing this particular programme is less convincing. Previous studies support that regular physical yoga practice and the yogic principles (yamas and niyamas) can promote individual and relational well-being (Ivtzan & Papantoniou, 2014; Malathi et al., 2000). In the current study, both psychological and social well-being improved significantly only in the initial assessment at 18 weeks (T1-T2)—when attendance and adherence to both the physical and theoretical components were highest. High compliance and commitment required for significant effects (Strijk et al., 2013) could explain these two indicators' lack of significant long-term impact. The small samples available for the consequent time comparisons could be another reason (Trent et al., 2019). Similarly, Ivtzan and Papantoniou (2014) reported that *regular* yoga practice is required to enhance psychological well-being. These results also speak to the model of longitudinal well-being (Lyubomirsky et al., 2005), proclaiming that active choice and commitment to wellness enhancement practices over a prolonged period are necessary for sustained enhancements in well-being (Lyubomirsky et al., 2011). The poor adherence and commitment to the theoretical component (as seen in Figure 5.1) might partly explain these results. Furthermore, the benefit of the group presentation of individual-based workplace interventions is that it can foster a greater sense of belonging and offer additional support from other colleagues also participating in the intervention (Kaplan et al., 2014; Michishita et al., 2017). However, social connectedness depends on participation and commitment from others and employees may feel unhappy if their attempts or expectations for positive social connection and interaction are not met (Kaplan et al., 2014). The higher adherence and attendance during the

initial 18 weeks of the intervention could explain the significant psychological and social well-being increases during this phase.

5.2.2 Work Engagement

The intervention's impact on work engagement is explored next. Results from the Friedman analyses offer partial support for H_{1b} , showing that partaking in the intervention led to moderate enhancement in the vigour aspect of work engagement over the course of the 36 weeks (T1-T3). Further inferences informed by the Wilcoxon results suggest that the yoga-based PPI could benefit overall work engagement and promote employees' energy levels and mental resilience while working (represented by the vigour sub-scale) when adherence and commitment are high, as was the case over the first 18 weeks of the intervention (T1-T2). It can also be argued that the significant increases in the vigour aspect of work engagement could have resulted from the enhancements experienced in emotional well-being, which allowed employees to expand into states of greater energy and enthusiasm in their work (Fredrickson & Levenson, 1998).

The results do not offer strong evidence that this type of yoga-based PPI would help employees to be more happily engrossed (represented by the dedication sub-scale) or concentrated (measured with the absorption sub-scale) in their work (Bakker & Oerlemans, 2011). The study by Trent et al. (2019) found significant improvements for overall work engagement and its vitality aspects following post-intervention and two-month follow-up measures among education professionals following a three-day off-site yoga-based wellness programme. They reported that participants continued to use and practice the programme tools on a long-term basis after the retreat. It has been noted that certain studies exploring the effects of well-being interventions on work engagement (Keeman et al., 2017; Ouweneel et al., 2013; Strijk et al., 2013) did not report intervention effects on the dedication and absorption sub-scales; only the vitality sub-scale and the overall scale were affected. Online

interventions appear to have less impact on work engagement outcomes (Keeman et al., 2017; Ouweneel et al., 2013), and in the case of longer-term face-to-face interventions (for the duration of six-month), high compliance was identified as an essential requirement to benefit work engagement (Strijk et al., 2013).

Employee well-being is associated with work engagement and is commonly regarded as a workplace wellness indicator in organisational well-being literature (Kumar et al., 2020; Salanova et al., 2013). Work engagement can impact organisational outcomes such as work performance and organisational commitment (Geldenhuys et al., 2014; Kim et al., 2017; Knight et al., 2017). If employees are granted time out of their work schedules to engage in workplace PPIs—such as the lunchtime yoga-based wellness programme implemented in this study—it should be justifiable in terms of desirable organisational outcomes. The current results offer promising prospects that this type of on-site, yoga-based PPI can enhance employees' energy levels and mental resilience while working (Bakker & Oerlemans, 2011). In line with previous studies (De Longis et al., 2020; Kobylińska et al., 2018; Menezes et al., 2015), the current study results suggest that the lunchtime yoga programme has the potential to serve as a viable strategy to build personal resources that can help employees combat work fatigue, manage stress, and better regulate their emotional states, which in turn boosts employees' vigour in their work (Knight et al., 2017). The study by Harris et al. (2015) offers further support that workplace yoga interventions can positively impact distress tolerance, which is an emotional regulation strategy.

The significant improvements found for the vigour aspect of work engagement in this study contrast with insignificant findings from previous studies investigating the impact of workplace well-being interventions on work engagement (Keeman et al., 2017; Ouweneel et al., 2013; Strijk et al., 2013). The current results suggest that there is value in offering face-to-face, on-site interventions to promote employees' personal resources conducive to

managing their sense of well-being. However, high commitment and programme adherence need to be maximised to attain this (Strijk et al., 2013).

5.2.3 *Emotions*

Contrary to what was expected, the current study does not offer conclusive evidence that positive emotions per se would be promoted through this type of workplace PPI. This finding was also surprising, given the findings on the emotional well-being aspect of mental health. Based on the Friedman results, hypothesis H_{1c} was rejected. However, the Wilcoxon results demonstrate that the initial period following the intervention, from the start up to 18 weeks of participation (T1-T2), could moderately boost positive emotions. This is in line with the findings by de Bruin et al. (2020), who found significant enhancements in happiness and affect indicators after a six-week multifaceted workplace wellness programme and Harris et al. (2015), who found significant increases in positive affect after a 16-week yoga intervention. However, the observed outcomes in the current study suggest that the initial positive affect boost may not be sustainable after 18 weeks. A possible reason for this might be due to the excitement and feelings of expansion experienced during the initial stages of the programme (Fredrickson, 2001) and the novelty wearing off after adaptation to change (Lyubomirsky et al., 2011). This finding also contrasts with the significant improvements observed for the emotional well-being indicator. Although the reason for this is unclear, it could be because emotions are more transient compared to the more enduring aspects of life satisfaction measured as part of the emotional well-being component.

Keyes' (2002) model of emotional well-being considers both high levels of positive affect and low levels of negative affect as important well-being indicators. Although the results do not offer promising evidence that participation in this yoga-based workplace wellness programme will substantially increase employees' positive emotions, results in reducing the feeling of negative emotions were more encouraging. Concerning the negative

indicators (H_2), the study results support the finding that this type of PPI can reduce negative well-being aspects. Donaldson et al. (2019) emphasised the importance of studying negative indicators in PPI studies and demonstrated that workplace PPIs are just as effective for targeting the reduction of undesirable aspects as it is for promoting positive aspects.

Based on the Friedman results, the probability of H_{2a} (negative affect) was accepted. The Wilcoxon tests further substantiate this. Significant moderate reductions occurred during the first half (18 weeks) of the intervention (T1-T2) and also for the entire 36-week period (T1-T3). This is in contrast to results from Harris et al. (2015), who did not find significant post-intervention effects for negative affect, but observed significant increases in positive affect.

The broaden-and-build theory recognises that negative emotions trigger the fight-or-flight response in the body (Fredrickson & Joiner, 2002) and when prolonged have detrimental effects on human physiology, which may compromise physical and/or mental health (Fricchione, 2014; Poalses & Bezuidenhout, 2018; Selye, 1973). Reducing negative emotions with workplace interventions can thus assist in promoting employees' mental and physical well-being. The yogic principles of non-judgement, kindness, and acceptance, along with mindful observation and awareness of behavioural and mental reactions and internal processes, can all assist with emotional regulation. Consciously practising these aspects during physical practice and everyday life encourages greater acceptance of emotional triggers and helps to lessen behavioural and mental reactivity to emotions (Harris et al., 2015). The significant reduction of negative affect found in this study could be explained by these notions. The current study findings provide further evidence that negative affect can benefit from a workplace yoga-based PPI which targets positive aspects of well-being (Hartfiel et al., 2012; Maddux et al., 2017).

5.2.4 *Perceived Stress*

The Friedman results supported accepting H_{2b} . Moderate reductions in levels of perceived stress were observed throughout the course of the intervention (T1-T3). The Wilcoxon results further supported this. Moderate reductions in perceived stress were observed during the first half of the intervention (T1-T2) and also over the full 36 weeks (T1-T3). In line with previous studies showing reductions in perceived stress following well-being interventions ranging from six to 16 weeks (de Bruin et al., 2020; Maddux et al., 2017; Wadhen & Cartwright, 2021), these results offer convincing evidence that partaking in this type of workplace yoga-wellness programme can offer valuable personal resources (seemingly through emotional regulation strategies) which can help employees manage their sense of perceived stress (Harris et al., 2015; Wang et al., 2017). It can be argued that focusing on mindful awareness during physical practice is an instrumental aspect responsible for the significant reductions in perceived stress scores. Magalhaes Das Neves et al. (2014) found that somatic awareness (similar to mindful awareness) during exercises brought about significantly lower perceived stress scores compared to aerobic exercise alone. However, results from Harris et al. (2015) partially contradict this. Although they found significant increases in mindful observation and some aspects of work-related stress (time urgency and depersonalisation as an aspect of burnout), there were no significant differences observed for perceived stress after a 16-week yoga intervention in their study.

Effective management of stress has important implications for employees' well-being. It has been demonstrated that mental, emotional, and physical resources are expended when dealing with job demands (Poalses & Bezuidenhout, 2018) and, when depleted, lead to feelings of exhaustion (Gailliot et al., 2007). This effect can hamper emotional regulation and negatively impact emotional well-being (De Longis et al., 2020; Gailliot et al., 2007). Prolonged exhaustion can also put employees at greater risk of burnout—which is

characterised by a lack of energy and emotional resources resulting from workplace stressors (Pătraş et al., 2017)—which negatively affect employees' emotional states (De Longis & Alessandri, 2020). The results from the current study offer promising evidence that participating in a lunchtime yoga-based PPI provide employees an appropriate opportunity and viable resources to replenish energy spent on work demands during the day to combat exhaustion and help them deal with stress more effectively.

Overall, the general trend observed for the outcome variables in this study (Table 5.5) is that positive indicators were enhanced to various degrees throughout the 36 weeks but declined somewhat after the intervention had ended. This finding further suggests that participants' sustained effort is required for positive workplace interventions to promote employee well-being and bring lasting positive benefits to the organisational climate (Desikachar, 1995; Lyubomirsky et al., 2005; Salanova et al., 2013). Although participants in the post-intervention sample ($n = 13$) reported that they had continued using the various programme tools after the programme ended, it appears that continued opportunity to participate in the workplace PPI is required to sustain the positive effects on well-being indicators in this particular context. This outcome contradicts the findings by Trent et al. (2019), who found that a three-day yoga-based wellness programme improved psychological and occupational well-being indicators in their study sample.

It should also be highlighted that the quasi-experimental nature of this study inherently entails possible external influencing factors, other than programme participation, that cannot be ruled out (Barns, 2019; Gravetter & Forzano, 2009). It is possible that the continuous decline observed in the general trends of negative indicators could be influenced by the annual holiday period over that time. Moreover, at all four of the different data collection points, participants indicated that they had experienced other significant life events that may have impacted their responses to the measures. However, the qualitative findings

offer deeper insights into the value of using the various programme tools to promote perceived well-being. These can offer further conviction that significant quantitative results emerged from participating in the programme (McBride et al., 2018).

Considering the different time comparisons, the findings are in line with the claim by Lyubomirsky et al. (2005) that increases in happiness require the active participation and sustained effort of individuals. More significance is seen for outcome variables in the T1-T2 pair of the Wilcoxon analysis when participation in both physical and theoretical programme components was the highest.

Self-selection into well-being interventions, commitment, and effort applied are key factors influencing successful outcomes (Lyubomirsky et al., 2011; Sheldon et al., 2013). The minimal impact seen on the study variables and the limited commitment and adherence to programme components further highlights the need to encourage greater participation to ensure the highest levels of impact when using workplace PPIs to promote employee well-being. In line with previous research (Chu et al., 2014; Cramer et al., 2015), the current study also supports that yoga is a safe tool to use for workplace PPI aimed at wellness promotion, as no severe adverse effects were reported. Similar to other studies (Keeman et al., 2017; Ouweneel et al., 2013; Strijk et al., 2013; Trent et al., 2019), the attrition rate and limited statistical robustness resulting from the small sample size could offer a possible reason for the limited significance observed in this study.

5.3 Chapter Summary

This chapter presented the quantitative results from the whole range of data collected throughout the research project. In line with existing empirical evidence, the study offers support that the yoga-based workplace PPI has the potential to promote general well-being (Woodyard, 2011), particularly emotional well-being (Menezes et al., 2015), and reduce employees' perceived stress and negative affect (Pascoe et al., 2017). The statistical results

do not substantially support that this yoga-based PPI will benefit social and psychological well-being or increase positive affect over 36 weeks. However, it does suggest that when employees experience greater levels of positive mental health from participating in the yoga intervention, they have more energy and vigour to perform their work tasks (Diener et al., 2020; Madrid & Patterson, 2020), experience fewer negative emotions, and manage stress better. Targeting strategies to promote commitment and adherence is essential for the successful impact of workplace PPIs (Strijk et al., 2013). In the next chapter, the qualitative findings—drawn more directly from participants’ lived experiences—are presented to provide further insights and a deeper understanding of the quantitative results reported here.

6 Chapter Six: Qualitative Findings and Discussion

This chapter presents the findings obtained from the different qualitative analyses. Data collected through the semi-structured interviews—conducted with a sub-sample of ten participants—and from open-ended responses included in the electronic questionnaires provide information that reflects participants’ subjective views and experiences of participating in the yoga-based PPI and using the various tools to promote their sense of well-being. Findings from the thematic and content analyses are presented in turn.

6.1 Thematic Analysis

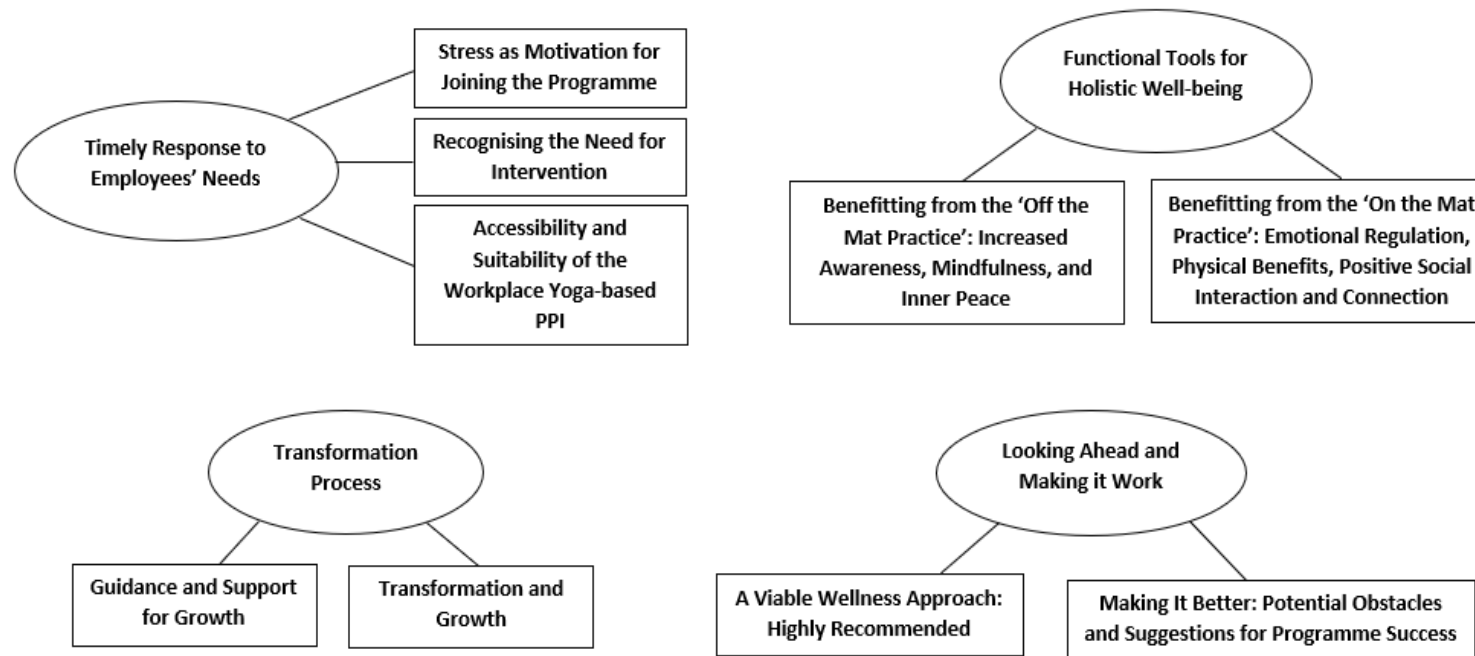
The final grouping of the analytic process produced four main themes—each with a set of sub-themes—which shed light on the value and feasibility of offering a yoga-based PPI in the work environment aimed at helping employees enhance their sense of well-being. Figure 6.1 shows the groupings of the main themes and sub-themes. These are presented next.

6.1.1 Theme One: *Timely Response to Employees’ Needs*

The first theme depicts the relevance of the intervention in response to participants’ needs when the programme was introduced. All the interviewed participants described experiences of various work and life stressors, and many also reported health issues—all of which can contribute to psychological distress compromising employee well-being (Fordjour et al., 2020). Participants knew of the mental and physical benefits of practising yoga, but busy schedules prevented many from pursuing it. When the yoga-based PPI was introduced in their work context, it afforded an ideal opportunity to finally explore the practice for its various benefits. Participant 1 described this timely arrival by saying, “*I believe it was a Divine Intervention at that time to say, ‘Oh, we want to do this at (name of university), do you want to participate in it?’*” (P1, female, age 55).

Figure 6.1

Thematic Map of Themes and Sub-themes



Three sub-themes are grouped under this theme to portray this PPI as a suitable and accessible solution to participants' needs. Participants indicated that it was convenient to attend yoga sessions during the workday, highlighting stress as the biggest motivator for joining the programme. In certain ways, the programme also helped to counter some of the stressors and subsequent adverse effects experienced as a result. Each of the sub-themes is unpacked next.

6.1.1.1 Stress as Motivation for Joining the Programme.

The first sub-theme sets the backdrop of what went on in participants' lives before the intervention. The amount of stress they were experiencing was a strong motivator to join the wellness programme. *"The biggest reason why I decided to join was the amount of stress that I was going through"* (P8, female, age 48). Many signed up, hoping to find *"some peace of mind"* (P3, female, age 43). Participant 1 explained how she turned to the yoga-based PPI in the hope that it would help her through the turmoil she was experiencing. *"I started by thinking, it will help me as a person, so much. It just must help me now through this turmoil in my psychological field, my spirituality field"* (P1, female, age 55). This extract also illuminates that stress can impact multiple aspects of a person's life (also see Fricchione, 2014; Vinay et al., 2016), psychological and spiritual in her case. This extract further supports the need for workplace wellness programmes that target the holistic nature of individuals (Fenton et al., 2014; Salanova et al., 2013; Van den Bergh, 2000).

Participants described a range of stressors they were experiencing. Most were work-related, while others were personal. Their experiences revealed how stress hampered their sense of well-being in different ways and spilt over between different life domains. The subsample of interviewed participants highlighted work-related stressors as the biggest reason for joining the programme. *"A lot of us are under pressure ... we work under some stressful*

conditions” (P2, female, age 32). An array of factors—such as heavy workloads, pressing deadlines, high expectations, frustrating bureaucratic processes, and various work interruptions—can contribute to work-related stress. This stress, in turn, can result in many detrimental consequences that adversely affect employees’ well-being (Poalses & Bezuidenhout, 2018). Detrimental consequences may entail compromised physical and psychological health, experiences of burnout, and low job dissatisfaction (Barkhuizen et al., 2013; Fordjour et al., 2020; Magalhaes Das Neves et al., 2014). Participants’ shared experiences highlight some of these stressors in the context of this study.

Perceived stress can be defined as a person’s perception that they cannot cope with a situation given the available resources (Magalhaes Das Neves et al., 2014). Factors which are beyond an individual’s control serve as stressors which are then perceived as stressful, and for some, this may cause distress (Poalses & Bezuidenhout, 2018). Participant 1 explained how *“the external factors that’s working in our working environment is sometimes just too much”* (P1, female, age 55). This extract indicates how external factors which overstretch personal resources can be perceived as stress. Various scenarios were described to portray the different sources of stress employees may experience in HEIs. For some, stress is caused by interruptions resulting from administrative and technological issues. *“I can’t tell you the administrative, err, sometimes the computer problems that you have, it’s so frustrating. You kind of lose it sometimes [laughs]”* (P4, female, age 53). This extract indicates the detrimental effects this can have on emotional well-being, causing feelings of frustration and being overwhelmed. Negative emotions also narrow the thought-action repertoires, negatively impacting problem-solving, creativity, enthusiasm, and social interaction—different aspects of workplace well-being (Fredrickson & Joiner, 2002; Rothmann, 2013).

Participant 1 highlighted bureaucratic influences as another source of stress in the Higher Education context:

There's other people we are dependent on, like Department of Higher Education, things coming from the Minster to say, this you have to implement. And we know it's not going to work. And then you have to work around that because it is the Government, it is the accreditation of the qualifications in the institution. (P1, female, age 55)

Both these examples align with previous stressors reported by academic and administrative staff in the local higher education sector, which can compromise employees' mental health (Poalses & Bezuidenhout, 2018).

Although governmental influences are beyond employees' control, they are directly affected by negative consequences which may result from bureaucratic decisions. For example, *"when the students are not happy with an increase in fee, they strike"* (P1, female, age 55). This may become a great source of stress when these interruptions interfere directly with employees' ability to do their work. *"If the students are outside and you hear them singing, now you're getting stress of, are we going out? When am I going to get my work done?"* (P1, female, age 55). These disruptions can also threaten employees' sense of autonomy and lead to a loss of meaning in their work, which can have detrimental effects on psychological well-being (also see Bezuidenhout & Cilliers, 2010; Ryff & Keyes, 1995). *"You sit at your desk, and you think, you know what, what is it worth, doing this? Is it helping someone? Is it really going out and saying, I made a difference in a person's life today?"* (P1, female, age 55).

Experiences of unrealistic expectations placed on staff also came to light as a source of stress. This can threaten the domain of environmental mastery—related to psychological well-being—as conditions necessary to accomplish tasks are challenged, leading to a sense of inadequacy and failure (Ryff & Keyes, 1995). Participant 4 described how academic staff in HEIs are placed under immense pressure to perform:

We are under pressure the whole time ... you have to perform the whole time. You have to start at six o'clock in the morning—I've heard that at the one seminar—and you have to work all the time. Work-work-work-work-work! You know that is the message you get. And it's nonsense! (P4, female, age 53)

This quotation portrays a lack of institutional commitment to promote a healthy work-life balance which could negatively impact life satisfaction (Rothmann, 2013). Some administrative staff are expected to meet daily targets regardless of external interruptions beyond their control. Participant 1 explained, *“if you don't do 500 today, you have to do 1000 tomorrow. You can't! You're a human being. So now you're getting stress”* (Female, age 55). These interruptions can negatively impact employees' sense of competence—an innate psychological need important for flourishing—as their ability to accomplish their targets and perform their work is challenged (Rothmann, 2013). These pressures can also negatively impact employees' physical health and well-being, leading to compromised work engagement and absenteeism (Fordjour et al., 2020; Vyas-Doorgapersad & Surujlal, 2015). Participant 1 described her reaction to the stress. *“Now you're getting like in headaches. Now you're getting like in, my tummy is aching”* (P1, female, age 55).

In an attempt to cope with the work stress and pressures, participants mentioned that they would skip lunch and work late, behaviours that are detrimental to well-being and a healthy work-life balance (Coetzee et al., 2019). *“You don't eat lunch because you can register 10 or so students during your lunch”* (P1, female, age 55). Expectations of working over weekends during student strike interruptions evoke resentment over having to sacrifice time spent with family. *“You just become angry”* (P1, female, age 55). This may negatively influence employees' job attitudes, increasing their vulnerability to psychological distress and depleting the necessary emotional resources needed to conduct work duties (Fordjour et al., 2020). Moreover, extreme workloads left some exhausted after a day's work, compromising

physical and recreational engagement. The latter is required for a balanced life (Coetzee et al., 2019; Poalses & Bezuidenhout, 2018). *“I used to dance previously ... I was active ... but then the work here ... it is so, huge or humongous [sic], then I end up not having to do [sic] certain things that I like”* (P9, female, age 46).

Besides negatively impacting employees' individual well-being, stress can also negatively affect organisational processes (Poalses & Bezuidenhout, 2018; Watts & Robertson, 2011). Participant 8 described how feeling overwhelmed by the workload can compromise service delivery to students:

Here at the registration, we are getting a lot of walk-in students, and sometimes it just overwhelms you, and you end up not knowing how to handle it. And sometimes you just end up um, not even communicating well with the students because the amount of pressure that you are in [sic]. (P, female, age 48)

Previous research also reported the phenomenon of high student demands and how it compromises employee well-being and organisational processes (Poalses & Bezuidenhout, 2018; Watts & Robertson, 2011).

Interpersonal challenges and workplace bullying were other sources of work-related stress that came to light in the context of this study. Participant 4 commented:

I was bullied ... There was a period that was really horrible, at work ... I was at the point of suicide. ... I didn't want to be at (name of university) anymore. I was severely depressed. ... and it affected my work ability ... that again got me in trouble with my HOD. So it went down, and down, and down. (P4, female, age 53)

Such issues can devastate employees' mental health and ability to work (Fordjour et al., 2020; Rothmann, 2013). This extract also demonstrates the downward spiral of mental health resulting from unpleasant workplace experiences and how negative employee relations and consequent adverse effects on mental health could impact employees' intention to leave

(also see Moller & Rothmann, 2019). Other authors have echoed that negative employee relations or interactions can severely compromise emotional and psychological well-being (Bezuidenhout & Cilliers, 2010; Ryff & Keyes, 1995; Watts & Robertson, 2011).

In addition to work-related stress, participants mentioned other stressful life and health challenges they experienced. Participant 9 struggled with the loss of her mother, which negatively impacted her well-being. *“My whole world was upside down ... I didn’t feel like anything”* (P9, female, age 46). Participant 6 also mentioned difficulties he experienced in his personal life. *“I had a difficult year last year ... my wife passing away ... I was also sick for a bit”* (P6, male, age 56). Employees do not function in a vacuum. Stress and challenges in different life domains inevitably impact one another (Fordjour et al., 2020). On the one hand, personal difficulties can impact employees’ functioning at work. *“Work is very stressful because, you know, there’s a target that you’re having, to meet, regardless of what other things are going on in your life”* (P2, female, 32). While on the other hand, emotional exhaustion resulting from overwhelming work demands can spill into employees’ personal lives with detrimental effects on family relations. Participant 8 commented:

When I arrive at home, I’m still overwhelmed. I’m still angry and my kids are being affected because now they will just ask one simple thing—maybe it’s homework related or something—and I will just blow it. When I arrive at home and I’m unhappy, I spilt that to my children and to my other family members, because it was coming from the inside. (P8, female, age 48)

Supportive and nurturing family relationships have been highlighted as an enduring personal resource conducive to well-being (Fredrickson, 2004). Providing resources and support for employees to deal with work demands and contribute to positive work experiences so that they leave work in a good mood can provide tangible benefits to

employees' family lives and long-term returns to organisations in terms of work engagement (Timms et al., 2015).

The various stressors identified by the participants in the context of the current study were aligned with other international studies (Fordjour et al., 2020) and research in the South African higher educational context (Poalses & Bezuidenhout, 2018), which highlighted similar stressors as predictors of psychological distress that threaten employee well-being. Previous research indicated that flourishing at work and life are positively related (Rothmann, 2013). This sub-theme demonstrated how participants' experiences of stress and consequent adverse effects motivated them to sign up for the 36-week wellness programme. The next sub-theme illustrates participants' recognition that they had to do something to help manage their stress and how this informed their decision to join the yoga-based PPI.

6.1.1.2 Recognising the Need for Intervention.

This sub-theme illuminates the need for a yoga-based PPI within the study context. Participants described how they realised they had to do something to help them better manage the various stressors they were experiencing. Participant 8 realised that she needed help to manage her stress and consequent emotional strain when she identified that she was spilling her frustrations from work over to her children and other family members. She indicated, *"that is when I saw that, you know what, I really need to do something about this"* (P8, female, age 48). Participant 1 described how she felt she was in dire straits and realised she needed help with the various challenges she was experiencing in her work and personal life. *"There was a lot of things happening, and as a person, I decided, yoh! I have to do something, err, to get me through this"* (P1, Female, age 55).

The need for tools to manage mental, psychological, emotional, and physical strain was highlighted. Some felt they needed tools specifically to help them cope in the working

environment. Participant 1 explained how she realised the need for appropriate tools to help her function better as an employee:

You just realise, you know what, I need more tools ... that's applicable into my working environment ... what can I do on a daily basis here, to level my stress out ... that I can look after myself better ... to be a better employee. Because if I'm going to stress now, I am going to be sick ... and then at the time I am not a good employee.

(P1, Female, age 55)

This example highlights a strengths-based motivation for wellness tools. Participant 4 needed tools to manage mental and psychological aspects of her well-being. Her need for the programme was specifically to help her manage her mental health issues within the workplace, a more reactive motivation for well-being promotion. *"I needed to get back into the workplace, and to overcome my fears and anxieties, and the depression ... I had to find a way of picking up ... I wanted to be able to release stress"* (P4, female, age 53).

Unlike conventional exercise, yoga targets well-being more holistically (Kishida et al., 2018; Woodyard, 2011). It is well-known as a method to connect with oneself, gain control over mental faculties, and find a sense of inner peace and well-being (Desikachar, 1995). Many people subsequently seek yoga to manage stress and improve mental health (Kishida et al., 2018; Pascoe et al., 2017; Woodyard, 2011). Participant 9 described her desire for a deeper connection to her inner being and managing her mind and emotional well-being as an inspiration to join the programme:

I felt like I'm not in tune with myself ... I see people when they're doing yoga; it looks like they're doing nothing, but then, when they get out of there, the effects are different. You can see from their faces. ... So I wanted to have that experience ... I've always struggled with the mental part ... The issues of, um, having to deal with my emotions, how to control them. And I thought maybe coming here—let me learn

something totally new. Let me see if ... yoga cannot have any effect of what [sic] the gym doesn't do to me. (P9, Female, age 46)

Participant 2 specifically sought out yoga to reduce her stress. Due to her severe illness, she had to explore alternative wellness options as she was unable to continue with her high-intensity training programme:

I used to gym ... the doctor was like, you can't go back to gym, like that heavy gymming ... high intensity ... you need to find something, um, less strenuous on your body. ... I've always heard that yoga is good; yoga helps with relieving stress. ... Then I said, okay yah, let me try it. (P2, Female, age 32)

Others were more strongly drawn to the physical benefits of the practice. Participant 7 knew the yoga exercises would help counter the negative effects she experienced from prolonged sitting. *"When we sit at our desks you get all these pain ... So it's like, no take this one, it's going to help"* (Female, age 64).

According to the sustainable happiness model (Lyubomirsky et al., 2005), personal motivation and willingness to change are essential to improving one's sense of well-being. Participants' recognition of intervention and desire to acquire tools to manage their well-being better demonstrate their motivation and willingness to change. The sub-theme also demonstrated the variety of reasons different participants had for joining—to manage mental health issues, relieve stress, manage emotions, and improve physical health. This sub-theme highlights that the yoga-based PPI may appeal to a diverse group of employees, not exclusively those with mental health challenges per se. Programmes that cater for all employees (not just "troubled" employees) and target well-being holistically from a strengths-based perspective can address the issue of stigmatisation commonly associated with reactive wellness programmes (Dobson et al., 2019). All participants indicated that they were familiar with the various mental and physical benefits of yoga. This sub-theme demonstrated

that participants joined the programme to gain the needed relief from various stressors and obtain the necessary tools to nurture multiple aspects of their well-being, following a recognition that they needed appropriate wellness tools. The qualitative descriptions of participants' motivations for joining the programme offer unique insights into the processes behind their desire for change, a key component required to enhance well-being (Lyubomirsky et al., 2011). The next sub-theme demonstrates how the programme was a convenient and welcomed initiative suitable to address participants' well-being needs.

6.1.1.3 Accessibility and Suitability of the Workplace Yoga-based PPI.

The final sub-theme in this grouping speaks to the convenience and relevance of accessing a yoga wellness programme in the workplace. Participants perceived it as a suitable intervention to help counter the negative consequences of the various stressors they were experiencing. Some mentioned that they always wanted to try yoga but never got around to it because of their busy schedules. When the opportunity was introduced into their work setting, they finally decided to take it up because of convenience. Participant three stated:

My sister-in-law kept telling me to do it for my well-being and peace of mind, and I never got around to it. I was never able to make a lesson or, you know, commit to it. And then, when it came to my doorstep, I mean, what better opportunity could I have asked for? So, that's why I took it up. (P3, female, age 43)

Those who practised yoga before the intervention and had already experienced first-hand benefits were happy to have access to it in their work setting. Participant 7 explained:

I've actually done yoga before, and I think it's very good for the body. Not just the body but also for the mind. It's relaxing. So, as long as it was in (name of university), I was going to do it. (P7, female, age 64)

Lack of time as a hindrance to engaging in wellness activities has been identified in previous research (Strijk et al., 2013). The participants in the current study echoed the value of having access to workplace wellness programmes conducive to their overall well-being.

Busy schedules, long working hours, family responsibilities and life demands were mentioned as reasons for not getting around to physical exercise—aspects that can negatively impact physical and psychological health (Fordjour et al., 2020). Participants expressed how the lunchtime programme afforded them an accessible opportunity to engage in a valuable activity that benefitted their personal well-being without interfering with their daily schedules. Participant 9 explained:

It's near—at work—and it doesn't have to interfere with my day-to-day ... when this came in, I said, oh! Good. Even If I don't go to the gym, at least I would have done something in-between my working time. (P9, female, age 53)

Participant 3 mentioned how the opportunity to engage in a lunchtime yoga programme is particularly suitable for working mothers who do not find time to nurture their well-being needs because of their family responsibilities:

A lot of these women are mothers, and we don't find time for ourselves. And at lunchbreak, instead of wasting it gossiping or wasting it going to the mall and doing senseless shopping [sic], you're doing something now valuable for yourself. I think it's a great bonus. (P3, female, age 43)

She considered the programme a constructive way to spend her lunchtime. In line with previous research, this is further support that offering lunchtime wellness activities—where employees participate in activities conducive for their well-being—is also a good way to monitor how they spend this time and ensure it is conducive to positive effects for the institution and employees alike (Sianoja et al., 2018).

In addition to the opportunity to access a valuable positive resource in the workplace, participants highlighted the appreciation that it came at no additional financial cost. *“It was easier because it’s just here. And I guess maybe the other thing would be ... it was free”* (P10, female, 34). Participant 1 specifically mentioned financial considerations when looking for supportive resources to cope with her turmoil. *“As soon as you start thinking that I have to do something, then there’s money involved”* (P1, female, age 55). Financial considerations support the need for accessible wellness resources in workplace settings. Access to well-being activities such as the yoga-based PPI, which offers strength-based tools for personal wellness promotion, might also be perceived as a form of distal organisational support—the extent to which employees feel their organisation values their contributions and cares about their well-being. Such a perception positively relates to psychological needs (specifically autonomy, competence, and relatedness) and self-realisation, another dimension of psychological well-being (Gillet et al., 2012).

Participants mentioned that the programme was convenient and welcomed the initiative to address their wellness needs. Various instances illustrated how the programme counterbalanced some stressors that negatively impacted their well-being. Participants confirmed that having access to yoga sessions during lunchtime offered an ideal opportunity and motivation to break away from their desks and recharge their energy. Participant 2 explained:

It was a nice getaway ... Because you would get away from your desk—I sit on [sic] my desk the entire day. I eat on [sic] my desk ... So it was a nice thing to know that okay, on Tuesdays and Thursdays ... I can get up, do something outside, get the fresh air, relax, and then come back and feel recharged. (P2, female, age 32)

Participant 4 described how the stretching counterbalanced the effects of prolonged sitting and enhanced her ability to perform her work. *“Just to stretch ... to counterbalance the sitting all day ... It helped me to perform better”* (P4, female, age 53).

Participant 6 felt direct relief from his stress, as the programme was available during the workday. He commented:

I think because we did it, err, during lunchtimes, um; it definitely had an impact on stress at work ... Because it was, you know, it was there immediately. So the effect of that was, err, in my opinion, was definitely there ... the physical stuff was good for me. (P6, male, age 56)

This finding is in line with research by Sianoja et al. (2018), who showed that employees experienced higher levels of well-being (measured as afternoon concentration, strain, and fatigue) at the end of a working day when they engaged in lunchtime recovering activities. Experiences of higher levels of well-being in the afternoon promote the chances employees would leave work in a good mood, which is conducive to long-term work engagement (Timms et al., 2015).

Participant 4 also indicated how offering a yoga programme in the working environment can counterbalance the negative effects and connotations associated with work pressures and overwhelming expectations in a positive way—by focusing on well-being and creating a nurturing and relaxing space where employees can recharge before returning to their workspace:

I can't stress the thing of space enough ... there's a place where you feel well, your body feels well and your mind feels well, and you can go back to that space to recharge, and then you can come back to the office. And you can take those skills back with you to the office. It makes a huge difference to experience it there [in the

workplace] ... Coming back to it all the time. So for someone that's really prone to depression, stress, anxiety, that is a really useful tool. (P4, female, age 53)

Stress, anxiety, and depression are common conditions that negatively impact employees' well-being to the detriment of organisational performance (Rana, 2015; Poalses & Bezuidenhout, 2018). The effort-reward imbalance model posits that work stress results from an imbalance or little reciprocity between efforts and reward, which place the worker in a continuous state of arousal that can lead to detrimental health outcomes such as body pain, reduced vitality, and compromised mental health (Vazquez et al., 2018). Offering workplace wellness activities to combat fatigue (such as the yoga-based PPI) could benefit employees' sense of well-being as it serves as a reward for their work efforts.

The first theme encapsulates the various circumstances employees might experience in their work and personal lives, which cause stress and adversely affect their sense of well-being. If there is a realisation that more resources are required to help manage their well-being, offering a yoga-base PPI during lunchtime can provide an opportunity to employees to promote their well-being and mental health, which serves as a protective resource against stress (Boshoff et al., 2014; Rana, 2015). The PPI might also be seen as a valuable resource offered by the employer, indicating that employees are genuinely regarded as their most valued resource. *"I felt that I was getting something, of value, different from just a salary. That's something of value for myself, my physical being, my mental being"* (P3, Female, age 43). Overall, this theme demonstrated that offering this type of PPI could serve as a plausible long-term strategy for greater organisational performance, benefiting employees and organisations alike—which is in line with previously proposed notions (Spreitzer & Hwang, 2019; Stelzner & Schutte, 2016).

Participants indicated that they were mainly drawn to the programme to remedy the detrimental effects of stress on their well-being. However, targeting negative aspects of well-

being and ill mental health does not automatically lead to flourishing mental health (Keyes, 2002, 2007). The programme resonates with Keyes' (2007) notion of wellness promotion by focusing on positive strategies and tools conducive to mental health instead of directly addressing factors detrimental to well-being. The next theme unpacks the specific well-being benefits participants derived from participating in the programme.

6.1.2 Theme Two: Functional Tools for Holistic Well-being

This theme demonstrates the various benefits participants experienced from applying the different wellness tools offered in the programme (yamas and niyamas, mindfulness, breathing, physical postures, and relaxation). The combination of theoretical and physical tools distinguishes the programme from single-focus well-being programmes—such as meditation, expressing gratitude, or practising acts of kindness—or conventional physical wellness interventions. *“This is not just stretching ... it’s deeper than that (P5, female, age 42)”*. The following extract from Participant 9 portrays how the yoga-based PPI, with its various tools, distinguishes this type of holistic wellness approach from ordinary physical exercise or single-focus approaches:

“Those high intensity ... it didn’t teach me the posture, it didn’t teach me the mental awareness ... More awareness of who you are, or how certain things happen around your life ... I actually learned from yoga, than from the gym [sic]. (P9, female, age 46)

Reports of physical, emotional, psychological, and social benefits experienced by participants demonstrate that the programme has the potential to promote well-being holistically (also see Kishida et al., 2018; Woodyard, 2011). *“What I did there ... actually had a lot of effect [sic] on my life, in total”* (P9, female, age 53).

Two sub-themes are included to illuminate the benefits and skills derived from the theoretical and physical programme components, respectively. However, it should be kept in

mind that the two components are not mutually exclusive but work hand-in-glove as a holistic approach to well-being (Siegel et al., 2016). The benefits derived from the theoretical component are unpacked first, as the theory subsequently informs the guiding principles of physical practice.

6.1.2.1 Benefitting from the ‘Off the Mat Practice’: Increased Awareness, Mindfulness, Acceptance, and Inner Peace.

The model of longitudinal well-being (see Lyubomirsky et al., 2005) states that sustained effort in applying appropriate tools is essential for bringing lasting shifts in happiness. In this study, yoga was selected as the preferred tool to promote well-being holistically as it has been previously shown to offer various wellness benefits (Kishida et al., 2018; Pascoe et al., 2017; Woodyard, 2011).

The theoretical component offered the philosophical underpinning and practical principles to apply in everyday life, and the physical yoga practice—aimed at enhancing participants’ sense of well-being. Participant 6 recognised that the yamas and niyamas are general guidelines that apply to everyday life, and hence can benefit anyone. *“The principles is [sic] basically life principles. Those things are so general; it’s not something which is restricted, I think, to yoga, it’s life”* (P6, male, age 56). Participant 1 explained how the lessons also equipped her with the sought-after tools she needed to function better in the workplace. *“I’ve got the tools to be a better employee. I’ve got more power over my mind ... I choose now what’s going in and going out”* (P1, Female, age 55). These two extracts confirm that the theoretical component targeted behavioural and mental domains of functioning.

The theoretical component was reflexive and helped participants become more aware of the different aspects of their functioning. This links to the notion that well-being rests on the interconnected nature of our relationship with ourselves and interactions with others

(Desikachar, 1995; Siegel et al., 2016). *“It helped me to be mindful of a whole lot of things. Like my habits, attitudes, behaviours, thinking, and just simple—breath”* (P10, female, age 34). Participants also indicated that the lessons brought certain values back into their conscious awareness. *“Every lesson ... it made me more aware of stuff I knew, but then it comes back”* (P5, female, age 42). Working through the lessons served as a reminder and encouraged participants to actively apply and practice general life principles conducive to well-being in their everyday lives. Participant 8 said the lessons reaffirmed that she should continue living her good values:

There was one ... living the truth ... not necessarily that I wasn't living truthfully before ... But when that reminder came across, I realised that okay ... the way that I was living, trying to always be truthful to myself and to the people around me. That means it's a reality, I need to continue living it ... Because it's helping ... we know very well what lies can do ... some can hurt other people. (P8, Female, age 48)

Participants' experiences of applying the yogic principles confirmed that the yoga-based PPI targeted core values and aspects related to knowing oneself and applied to the workplace and personal life domains—characteristic aspects that define individual-based positive interventions targeted at workplace well-being promotion (Salanova et al., 2013; Timms et al., 2015).

The yoga philosophy offers guidelines on how to conduct ourselves in ways that are more conducive for lasting well-being and personal growth. Participant 3 described how she found value in the theoretical lessons, as they sparked greater awareness and inner reflection. *“I think practising it and listening to the talks, especially... when you gave us the theory, we read it, we just read it, but listening to you reiterate it in the class, sometimes made you think”* (P3, female, age 43). This extract highlights the value of reinforcing wellness practices continuously (also see Lyubomirsky et al., 2005; Salanova et al., 2013). Simply knowing

something is not enough; wellness lessons must be continuously applied to have beneficial effects. Offering this type of workplace wellness programme encourages and actively supports employees to develop dedicated wellness habits conducive to their sense of well-being (Siegel et al., 2016).

Participants described how they benefited personally from applying the yamas and niyamas. Increased mindfulness and control over emotional reactions was something

Participant 3 experienced:

It just made the things that normally agitated me seem a bit more trivial. I felt myself just becoming more mindful and, you know, letting go of things that shouldn't interfere in my space. Just let it go. Breathe, let it go. So that's how it helped me. (P3, female, age 43)

Participant 8 mentioned how she benefitted from the reminder to surrender the things beyond her personal control as she became more accepting and patient. *"Sometimes we tend to forget that there are things that we don't have control over ... I became patient ... accepting of things that I cannot change"* (P8, female, age 48). Practising more acceptance and surrendering things beyond her control allowed her to experience a greater sense of peacefulness (also see Kishida et al., 2018).

When there is awareness, we can change our attitudes and behaviours (Desikachar, 1995). Practising the notions of acceptance, contentment, and no-attachment allows for a greater sense of inner peace to develop within an individual. Participant 1 noticed this sense of deep inner peace and freedom from suffering one can experience when applying these principles. *"For the whole journey, if I look back, there was peace coming somewhere into my mind ... It's like, the peace is in my soul"* (P1, female, age 55). The ability to be more accepting and peaceful relates to the concept of harmony, an important component of psychological well-being at work (Rothmann, 2013). Moreover, contentment associated with

greater acceptance of things outside one's control is also conducive to a more positive emotional state expanding attention, cognition, and action that widen the array of perception, thoughts, and actions (Fredrickson & Levenson, 1998).

The attitudes and behaviours we have toward ourselves form the basis of our attitudes and behaviours towards other people (Desikachar, 1995). Participant 9 highlighted how the lessons helped her to have a more positive attitude and behave differently. *“It actually helps me to be able to deal with my life situation in a better way, and be a bit [more] positive ... that on its own, actually makes me to be a better person around other people”* (P9, female, age 46). Previous research indicated the important role of optimism in predicting hedonic well-being (Chang et al., 2020). The quotation also highlights how optimism could favourably impact positive interpersonal relations, another aspect related to psychological well-being in workplace contexts (Keyes et al., 2002; Rothmann, 2013).

Participant 8 also indicated that she became more considerate in her interpersonal interactions. *“You just sometimes speak the way you want, not even considering people that you're talking to. So I've learnt to be very considerate, in terms of how I speak to people”* (P8, female, age 48). Kindness and considerate actions hold well-being benefits on both personal and interpersonal levels. Kishida et al. (2018) demonstrated that yoga could enhance a person's relationship with themselves through self-compassion and mindfulness and with other people through enhanced compassion and social connectedness—which could, in turn, lead to enhanced health and well-being outcomes. Such improved relationships can be conducive to a more positive workplace climate (Geue, 2018; Gondlekar & Kamat, 2016).

This sub-theme demonstrates how the theoretical component impacted participants' well-being, personally and concerning the outside world. Greater awareness of personal behaviour and interpersonal conduct was strongly emphasised. The sub-theme shows that the yoga-based PPI has the potential to encourage ethical behaviour in the workplace that is

respectful, caring, and supportive—behaviours which impact intrapersonal, interpersonal, and organisational levels (De Cremer & Moore, 2020). Constructive employee behaviour is conducive to a positive workplace climate which is positively associated with psychological well-being (Gondlekar & Kamat, 2016).

6.1.2.2 Benefitting from the ‘On the Mat Practice’: Emotional Regulation, Physical Benefits, Positive Social Interaction and Connection.

This sub-theme highlights the various benefits explicitly derived from the practical component. The physical practice sessions produced a unique set of benefits through the mindful awareness, breathing, bodywork (asana), and the mental and physical relaxation derived from the Yoga Nidra technique. Moreover, participants indicated how the theoretical lessons impacted their physical practice and how the lessons and tools derived from the physical practice also translated into their everyday lives.

The physical yoga practice (or asana) emphasises the connection between mind, body, and breath (Desikachar, 1995). For example, while consciously focusing on breathing, the mind is drawn into the body and subsequently into the present moment. Participant 4 recognised how, “*breathing helps you to be mindful and in the now*” (P4, female, age 53). However, the powerful benefits one can derive from using one’s breath are very often overlooked (Edwards & Beale, 2011; Kishida et al., 2018; Van der Merwe & Parsotam, 2011). Participant 3 illustrated this underrated recognition of breathing as a wellness tool. “*When I first started, and you guys were breathing ... I was like, what a waste! Breathing! Did I come here to breathe?!*” (P3, female, age 43). However, she soon experienced the first-hand well-being benefits it offered her in everyday life:

I realised after several lessons of breathing, this actually helped me to slow down ... I’m normally a very agitated person. I’m doing everything fast paced. And this was

teaching me how to actually just, slow down. And that's what I needed, I needed to learn that. (P3, female, age 43)

This extract indicates how breathing practice and increased awareness of inner states can assist with greater control of emotional responses and reactions. Previous research confirmed that deep controlled breathing assists with stress relief, boosts energy levels, enhances clarity of mind, and improves interpersonal relationships (Van der Merwe & Parsotam, 2011). The quotation also highlights how the tools applied and practised on the mat (like deep, conscious breathing) can translate to application and well-being benefits in everyday life (reduced emotional reactivity).

During the physical practice, participants were constantly reminded to focus inwardly and observe physical, mental, and emotional responses and reactions without judgement. Practising compassion towards oneself and not comparing oneself to others are key practice principles that were reinforced. Another aspect that distinguishes yoga practice from most sports and physical activity is that it is non-competitive (Edwards, 2006; Saraswati, 2013a). Instead, each person starts from where they are and are encouraged to focus on their own process (Desikachar, 1995). Participant 5 shared how this helped her *“to not judge yourself so much, and to do what you can with your body”* (P5, female, age 42). This quotation depicts the sense of compassionate acceptance that the practice principles can cultivate in individuals, specifically when practising postures that can be difficult. It also relates to the self-acceptance dimension of psychological well-being (Keyes et al., 2002; Ryff, 2014).

Participants reported a range of specific physical benefits they gained from the asana practice. *“The practical component of it, it helped me with my balance ... it helped me a lot to find the strength to balance and to contain myself ... physically it helped me to balance myself”* (P8, female, age 48). She explained how improving her physical balance also

helped her to feel more grounded and assertive when she had to take a stance or make a decision:

In terms of my well-being I'm grounded when I'm taking decisions. I don't just take a decision just because I must take it to satisfy people ... I think I've learnt to be—to put my foot down when I'm taking decisions. (P8, female, age 48)

This comment illustrates how building balance and strength in the physical practice “on the mat”, can translate to everyday life “off the mat”, such as becoming more assertive and confident and establishing firmer boundaries in interpersonal relationships. It also speaks to how overcoming physical challenges with one’s body could encourage psychological shifts (Cramer et al., 2013; Mrazek et al., 2016).

The physical release of tension from the body was another reported benefit.

“Physically I could release the stress ... The tension in my body ... Especially those places where you have lots of tension when you work in front of a computer ... I felt better. My body felt better” (P4, female, age 53). It also helped with building physical strength. *“I'm strengthening my core, my muscles”* (P1, female, age 55). Strengthening the muscles and the core particularly helped Participant 7 with her lower back pain, commonly associated with a sedentary lifestyle and prolonged sitting (also see Endries et al., 2013). *“It really helped my back, it feels less pain ... Sometimes almost no pain”* (P7, female, age 64).

Some participants reported that the practice helped them to lose weight, which in turn can foster more positive feelings towards oneself—which are also associated with the self-acceptance dimension of psychological well-being (Ryff & Keyes, 1995). *“There are clothes that I'm now able to wear, and I feel good when I'm wearing them”* (P8, female, age, 48). For some, it helped relieve physical ailments such as constipation: *“I had constipation ... there were those exercises when you fold your legs, it helped a lot, honestly speaking. Now I'm a regular!”* (P9, female, age 46); and reduced the occurrence of

migraines commonly associated with stress (de Bruin et al., 2020): *“I still get migraines, but it is much more [sic]less [sic] than what I got previously”* (P1, female, age 55). The reported physical benefits shared in the aforementioned examples offer evidence that the yoga-based PPI can counter a variety of potential predictors of psychological distress among employees which negatively impact a sense of well-being—specifically aspects related to musculoskeletal complaints, weight management, and general health (Fordjour et al., 2020).

Participants also highlighted the value of the Yoga Nidra, which concluded the practice sessions. They expressed that it enabled them to relax after the physical practice and return to work refreshed: *“The relaxation, ooh!”* (P9, female, age 46); *“Energy! It used to wake me up. ... I legit felt like I had just taken a power nap and I was waking up and I was feeling great. Yeah, and I would work overtime, and I’d be happy”* (P2, female, age 32). These quotations show that the programme can offer an opportunity to recharge during the workday and serve as a lunchtime recovery activity which can also uplift affective states and promote vigour and enthusiasm in their work—which is supported by previous studies using active rest (Michishita et al., 2017) and lunchtime park walks and relaxation exercises (Sianoja et al., 2018).

Participants’ experiences also indicated that the lunchtime yoga-based PPI held some benefits in terms of social well-being. Participating in the programme with other colleagues allowed for more relaxed interaction in a fun environment, which can contribute positively to employee relations, workplace climate, and culture (Geue, 2018; Salanova et al., 2013).

Participant 1 explained:

I met my new colleagues that was [sic] working in another space and realised that we are all in the same boat. You know, sometimes we get so isolated that you think, ‘oh,

that it's only me that has this huge problem' ... we are in this together and how we enjoy it ... the programme was just so much fun. (P1, female, age 55)

Instead of working under stress and pressure together, the programme created a more positive environment where colleagues worked together towards a common goal—to enhance their sense of well-being—in a more relaxed environment. The programme also has the potential to redefine the us-and-them relationship between academics and supportive administrative staff, a well-documented cause of conflict and organisational stress in the higher education workplace setting (Poalses & Bezuidenhout, 2018). Participant 5 indicated how the PPI holds the potential to contribute to a more favourable workplace climate in the long run:

It's got a positive energy in the workplace ... Maybe they don't feel the impact immediately, but on the long term there's a major difference. And it's the climate of the work, and all that stuff, you know, and the organisation ... I actually felt more connected. (P5, female, age 42)

This greater sense of connectedness relates to the social integration dimension of social well-being (Keyes, 2002; Rothmann, 2013). The extract also highlights that it will take some time for these benefits to filter through to the workplace culture, which motivates offering continuous access to such programmes in the workplace and committing to wellness promotion on a long-term basis (Salanova et al., 2013). Previous research supports that yoga can enhance aspects of social well-being in general (Ivtzan & Papantoniou, 2014; Kishida et al., 2018). The current study's findings show how this could also apply in a work context.

Participants also indicated that the programmes benefit from colleagues supporting and encouraging each other to attend and stay committed. *"Some of the colleagues were also very motivating for us to say, 'Am I going to see you at the yoga?' "* (P1, female, age

55). Workplace wellness programmes can also have a positive contagious effect (Geue, 2018; Spreitzer & Hwang, 2019). Employees can encourage one another to engage in wellness activities when motivation is low:

When I came with my clothes and it was time and I was like, ai not today. But once I go to the bathroom and then change and I'm like, okay I see there's this person going and I'm like, okay, let me go. But I think that is always in our minds ... I've also noticed even when I have to go to my normal gym, it's a struggle to go there. (P8, female, age 48).

Previous authors have recommended in-person, on-site interventions to promote employee participation and commitment to wellness programmes (Ouweneel et al., 2013; Strijk et al., 2013). The previous quotations demonstrate how in-person, on-site wellness programmes can help employees to motivate each other to attend, adding to a sense of positive social contribution.

The second theme supports that the yoga-based PPI offers various wellness tools conducive to promoting holistic employee well-being. Overall, participants described cultivating more positive emotional experiences and various state-like (cognitions, behaviours, affects, and physiology) and enduring resources (positive beliefs, engagement, coping, health, and social relationships). These resources enable positive emotional regulation strategies that can promote positive organisational performance (Diener et al., 2020). The reported benefits derived from participating in the programme indicated that the theoretical and physical components work in tandem, offering tools applicable to different life domains that can benefit employees individually while also providing more organisational benefits. While the various well-being benefits associated with yoga are well-documented in diverse contexts, including workplace settings (Hartfiel et al., 2012; Ivtzan & Papantoniou, 2014; Kishida et al., 2018; Siegel et al., 2016), the qualitative findings from this

sub-theme offer unique insights into how using yoga tools to implement a workplace PPI can promote employee well-being holistically within the South African context.

6.1.3 Theme Three: Transformation Process

This theme depicts personal changes from participating in the yoga-based PPI. It describes how the process, as well as the guidance and support provided—by the programme structure and the way the wellness facilitators delivered it—encouraged a sense of acceptance and greater confidence within participants that were conducive to change and personal growth. The theme comprises two sub-themes; the first demonstrates how different aspects of the programme encouraged and facilitated the process of change. The second illustrates some examples of growth and transformation that participants noticed in themselves. A discussion of each follows next.

6.1.3.1 Guidance and Support for Growth.

Personal transformation is at the heart of yoga (Desikachar, 1995). The different tools included in the yoga-based PPI hold the potential to act as catalysts and promoters for positive change on various levels—physical, emotional, psychological, and social. Proper guidance and support are instrumental in growth (Desikachar, 1995; Van Zyl & Rothmann, 2012). The programme design and structure provided a necessary scaffolding, while the wellness facilitators demonstrated the yogic principles presented in the lessons. Participants shared various aspects they appreciated about the programme structure and how it was implemented.

The initiative was introduced with a clear intention to promote well-being from a strength-based perspective—a proactive means for well-being promotion rather than a means to address problems (Fenton et al., 2014; Vyas-Doorgapersad & Surujlal, 2015). Participant 4

appreciated this proactive approach to wellness promotion in the workplace, and it particularly drew her interest:

I think the fact that you introduced it so well in terms of positive psychology. I think that's really a strength because you told people at the beginning, this is about positive psychology, and this is about feeling better ... in terms of your body and in terms of your mind." (P4, female, age 53)

The strengths-based focus geared participants for positive change and also addresses the stigmatisation associated with reactive wellness approaches—focused on fixing problems of “troubled” employees—that can discourage employees from engaging in wellness programmes (Dobson et al., 2019).

Participants also highlighted the value of proper planning: *“It was very well organised ... I think that is absolutely the strength that was carrying the programme through”* (P1, female, age 55); and being guided through the process with sufficient information in terms of what to expect: *“It was well thought out, you explained everything ... there was no shock! ... You know this is what we're doing. Being told, this is what we're going to do. I liked that. I really, really, really liked it”* (P2, female, age 32). Knowing what to expect at each phase put participants at ease and prepared them for what was to come each step of the way. This knowledge helped them feel guided and supported.

Honouring the principle of gradual progression (Desikachar, 1995), the programme was designed to progress from a basic level that accommodated everyone. It is common for people to think they will not be able to practice yoga based on the stereotypical images commonly portrayed in books and social media (Desikachar, 1995). Starting from a fundamental level helped to make the programme accessible and inclusive of anyone, regardless of body type, fitness level, or flexibility. Participant 1 shared how she appreciated this:

We started at a very basic, err, basic-basic of yoga. It wasn't expected of us to start with very high poses and stuff. We were just doing rotation. It's like in, okay... But all of us could do it. (P1, female, age 55)

Participant 3 highlighted the value in the repetition and gradually building up from fundamental postures to something more challenging:

We did it twice a week, so it was reiterated. That was good ... if we move from one thing too quickly to the other, then I think that people would not see the value of, you know, eventually coming to that Surya Namaskar. All the movements we did and the way it was set out, preparing us to do that. I don't think we would have reached that err, physical ability if it wasn't structured like that ... I think a lot of people would have left, you know, because it would have been a bit challenging for them. (P3, female, age 43)

Repetitions built into the programme offered a sense of familiarity and an opportunity to commit the practice to memory. The repetition also instilled the learning principle of repeating intrinsically rewarding behaviours required for health interventions aimed at well-being promotion (Edwards, 2006). Gradually moving on in progressive phases offered the variety necessary to prevent boredom and stagnation (Lyubomirsky et al., 2005; Sheldon et al., 2013). As the phases became more challenging, participants were systematically presented with opportunities to try new things. This demonstrates how the yoga mat is a safe space where one is sensitised to “take risks” and explore new boundaries. Careful preparation of the practice is important to ensure this sense of safety (Desikachar, 1995). If the practice is initially too challenging, it can reinforce existing beliefs that one is unable to accomplish something one doubts, which could further erode confidence in one's own ability. This, in turn, can negatively impact the psychological well-being dimension of self-mastery, which plays an important role in flourishing at work (Rothmann, 2013).

Despite the gradual progressive structure of the programme, proper guidance and facilitation through the process are also essential—since every person remains unique in terms of their physical capabilities and the pace at which they progress. Participants expressed how the supportive guidance offered by the wellness facilitators helped them feel accepted and build up the courage to approach more challenging postures. Participant 8 shared how this promoted a sense of comforting reassurance and encouragement:

Everybody—with whatever type of body you had—everybody was accommodated and I felt um, accepted. You know when you feel, okay, I'm accepted in this environment because ... even if I can't do this, at least they are able to tell us, 'okay, this is the other way you can do it, ... when they see that we are struggling with something, they will tell us first, "okay let's try it this way—this is the other way that you can, that you can do this, particular exercise", then—until you master it and then you can come to this, to this one ... it made me feel at ease ... and be prepared to try. (P8, female, age 48)

Previous research highlighted that workplace wellness promotion programmes could lead to weight stigma and discrimination (Täuber et al., 2018). The extract from Participant 8 indicates the importance of presenting proactive wellness programmes to minimise such unintended negative consequences and how this was realised in the present study.

Participants also shared how they valued the facilitators' patience, support, and compassion. Change requires courage, and caring, compassionate facilitators can assist practitioners on the path of transformation (Desikachar, 1995). Participants mentioned various aspects they valued in the facilitators. For Participant 1, it was the reassurance that there is no expectation or pressure to perform:

When we started the programme, and the message is coming through, there's no right or wrong, you do exactly what your body allows you to do It was such a relief that

I can just go in there and um, do what I can do. So, that was fantastic. (P1, female, age 55)

This can nurture the self-acceptance dimension of psychological well-being, defined as a positive attitude towards oneself (Ryff & Keyes, 1995). Participant 2 mentioned how she valued the patience the facilitators displayed. *“It is so hard to practice patience, but you guys were very patient. Err, you explained everything!”* (P2, female, age 32).

Participant 1 explained that the commitment and dedication displayed by the facilitators served as a form of motivation:

The instructors were very motivated, and they come in and they make it so much wonderful [sic] for us to be there, that you want to be there. So, that was motivating ... you wanted to go there because the instructors were really committed to do the best that they can. And if somebody does the best they can, then you feel, I want to be there as well. (P1, female, age 55)

Miglianico et al. (2019) highlighted how the energy and enthusiasm transmitted by programme facilitators impact intervention outcomes. The former excerpt offers further evidence of this.

The team of wellness facilitators also demonstrated how people are unique, and that there are many ways to interpret and understand something. Participants described the value of receiving the facilitators' diverse interpretations of the lessons, which aided a deeper understanding of the yogic principles. Participant 6 shared, *“I found it quite interesting that all the yoga teachers explained it in a different way ... I think it's good ... it enhances your sense of understanding”* (P6, male, age 56). Although the facilitators were guided by a manual to standardise the delivery, participants highlighted that the different facilitators still brought in some variety. Participant 7 recognised this as a strength. *“There was this variety of you people coming [pause] different sessions, and each of you tended to be doing something*

different. And that, the variety itself was really good ... I liked the variety. That was a big strength” (P7, female, age 64). Van Zyl and Rothmann (2012) recommended that at least two diverse facilitators present PPIs to ensure maximum impact. Research by Sheldon et al. (2013) confirmed that variety helps maintain the longer-term effects of positive life changes brought about by well-being interventions. Allowing facilitators freedom to present the programme in their own unique way while being guided by a manual reinforced the inherent characteristics of flexibility and freedom yoga teaches and demonstrates this by example.

This sub-theme portrayed how the programme's various components paved the way for personal change. The qualitative descriptions of participants' experiences provide unique insights into the value of the particular approach and structure of implementing the yoga-based PPI. According to the researcher's knowledge, these findings make a novel contribution to the existing body of literature by demonstrating a particular approach to structuring and implementing a workplace PPI that can target different aspects of well-being promotion. Inclusivity, sufficient information, proper structure, gradual progression, repetition, variety, and compassionate guidance from passionate and dedicated programme facilitators are key components to facilitate aspects such as self-acceptance and self-mastery—components associated with psychological well-being (Ryff & Keyes, 1995). The next sub-theme depicts particular occurrences of changes and growth participants noticed as a result of taking part in the 36-week wellness promotion programme.

6.1.3.2 Transformation and Growth

This sub-theme illustrates some personal changes and transformations participants experienced in their attitudes and behaviours. As indicated in the second theme, the programme encompassed more than stretching, breathing, and relaxation techniques. The yamas and niyamas go deeper into the exploration of personal habits, behaviours, thoughts,

and tendencies—which was also demonstrated by Siegel et al. (2016), who affirmed that their workplace yoga intervention had a positive outcome for study participants. The reflective nature of the theoretical component can make one aware of habits, beliefs, or aspects of one's personality that are detrimental to well-being and peace of mind—aspects associated with enhanced well-being (Van Zyl & Rothmann, 2012). However, acknowledging personal tendencies detrimental to one's well-being is not easy; it requires courage and self-compassion (Desikachar, 1995).

Participants shared some of the psychological discomforts they experienced throughout the process. Participant 2 found the theoretical lessons particularly challenging. *“The yama, niyamas, I really did not like them from the beginning. I used to say, I hate it! ... ‘Caused it forced me to grow! Working on yourself is not nice”* (P2, female, age 32). She explained how difficult she found it to reflect and acknowledge negative attributes, patterns, and behaviours in herself. *“It was so hard! The reflecting ... growth is not nice”* (P2, female, age 32). But as she realised that she became less reactive in her interpersonal reactions, she recognised that she was transforming her way of being and felt good about this change. *“Taking a moment, not to always react ... let's say if I'm trying to be a nicer person. After I'm nicer to another person and had a moment to just not jump at that person, it would feel good. It will be like ... Wow, okay, I'm growing”* (P2, female, age 32). The quotation demonstrates improved emotional reactivity and its value in promoting more harmonious interpersonal interactions. Previous research offers support that caring, respectful, and compassionate behaviour in the workplace benefits organisational functioning (Janse van Rensburg & Rothmann, 2020).

Other participants expressed negative experiences and feelings evoked during their physical practice. Practising asana provides a compelling learning experience. Being challenged with physical abilities can evoke feelings of inadequacy, especially when falling

into the trap of comparing oneself to others. Participant 8 described her reaction when she could not do a particular posture: *“When you look at other people and you’re like, okay everybody can do it, what’s wrong with me?”* (P8, female, age 48). Participant 9 described her harsh reaction towards herself when she could not do something: *“If I can’t do something, I get so hard on myself. I become hard on myself. Especially, going up and then I realise, oh no!”* (P9, female, age 46). The positive psychology movement has been criticised as the “tyranny of the positive”, failing to appreciate the contextual complexity of emotional outcomes, and painting negative emotional states as undesirable and pathological (Held, 2004; Lomas, 2016). The former extracts demonstrate how the yoga-based PPI honoured this emotional complexity and how negative emotional states accompanied growth. Participants were reminded to exhibit compassion and non-judgemental acceptance of themselves to support them through this process.

As indicated in the previous sub-theme, the facilitators supported participants through the difficult processes and reminded them to practice patience and self-compassion as they persevered through the process. Participants described how this compassionate support and constant reminder to practise with acceptance and patience facilitated a change in perspectives. Participant 8 said:

One of the ladies [facilitators] indicated that you know what, ‘it takes some time ... you need to give yourself some time. We also didn’t just start it now and mastered it, we took years to be able to be where we are’. So I changed my attitude and just told myself, you know what, yes, they can master it, it’s fine, I’m also getting in there. (P8, female, age 48)

Participant 2 explained a similar process:

When I got better, it made me always realise that all I need is time. If something is difficult, just give it time and then I would get better at it ... as long as I want to. Do

you know what I mean? And then, some things, I also felt like, if something is not, um, going okay now, we concentrate on it. If it's not—or if my leg can't sit like this now, it means it will never sit like that! And why is that one ... You know, we do that! And it helped me kind of go like, okay, just give yourself time with everything. And, err, yah, be patient! I feel like it did that. (P2, female, age 32)

The former excerpts demonstrate how the facilitators' reminders and participants' personal experiences of progress made in the physical practice brought about changed perspectives and new realisations that are more positive and optimistic. It also shows how the mechanisms, willingness to commit to well-being promotion, and personal motivation for change contribute to personal growth and the manifestation of positive transformation (see Lyubomirsky et al., 2011).

In line with the above, Participant 1 described the realisation that participating in the programme brought about more light-heartedness in her outlook on things:

The other colleague also said to me—we were laughing about something that was happening and she said, 'You know what, a year ago, we were—we will [sic] not be able to laugh about this'. I said, 'that's true!' ... We see different things in a different light. (P1, female, age 55)

The extract portrays the development of greater optimism. Previous studies have identified optimism as a psychological resource that protects against the negative consequences of work stress (Barkhuizen et al., 2013; Field & Buitendach, 2011; Donaldson et al., 2015; Wang et al., 2017).

Participant 2 also expressed a change in her perspective and gaining more confidence in her work ability:

I started not re-reading the same thing five times ... I'll double-check something too many times, and that would waste my time. So instead of, in a space where I could've

done five applications, I would do like three ... I was like okay, I know what I'm doing. Don't nit-pick things so many times ... this year for some weird reason I'm like, know what [sic], you can't keep on stressing about the same things. (P2, female, age 32)

These comments portray how the programme facilitated personal growth that influenced a greater sense of environmental mastery and how that can enhance work performance.

Participant 8 described how she exceeded her expectations when she approached the practice with a willing attitude:

Body-wise, I realised that I could do things that I thought I couldn't do ... sometimes you just see people stretching themselves and you're like, ah, I won't do that—until you try it ... I was struggling with other exercises because, I think it was just because of the mentality, not necessarily that I couldn't do it ... Just because of the mentality that, no I can't go that far. But I realised that you know what, when you push yourself you end up achieving whatever that you put your mind to it ... when you have to take your leg and put it in front, and you're like, really, did I do that?! (P8, female, age 48)

She also described that she recognised the practice made her stronger and more assertive: *“I realised after, um, after starting and attending a couple of classes, that you know what, I think I'm stronger now inside. There are so many things that I'm able to stand, that I wasn't initially”* (P8, female, age 48). This portrays how overcoming physical challenges with her body facilitated shifts in psychological well-being in terms of increased confidence and assertiveness (also see Cramer et al., 2013; Mrazek et al., 2016). Such character strengths play a role in developing and maintaining well-being by enabling a greater sense of pleasure and positive experiences (Lambert et al., 2015).

There is also evidence of how the programme changed lifestyle habits. *“I’m eating better ... when I put in two sugars, I said, “o-o-o, no, no, no, I can’t put this in my body”. You know? [Laughs] And the awareness is there, for eating better as well”* (P1, female, age 55). As highlighted in the previous theme, positive lifestyle changes could lead to weight loss, which was indicated as one of the benefits gained from the physical yoga practice. This outcome suggests a possible upward spiral relationship between yoga-based PPI and positive health behaviours. Previous research supports that healthy lifestyle habits can evoke more frequent positive emotional states (Fredrickson et al., 2020).

This sub-theme presented evidence of positive changes and transformation following an uncomfortable growth process. For some, the change that came about through participating in the programme was unexpected: *“I didn’t realise the impact it was having on me”* (P2, female, age 32). Participants described how they gained more confidence in themselves and came to see things in a different light. Some also began to make lifestyle changes more conducive to overall health and well-being.

Overall, this theme illuminated the pathways of change and transformation facilitated by programme participation. Previous research has highlighted the need for a deeper understanding of PPIs' mechanisms and how they contribute to well-being benefits (de Bruin et al., 2020; Page & Vella-Brodrick, 2013). This understanding is especially useful in dealing with insignificant results (Winslow et al., 2017). High attrition, small sample size, and a single-group and quasi-experimental designs are common factors that can contribute to insignificant outcomes in workplace well-being intervention studies (Domingues, 2018; Keeman et al., 2017; Ouweneel et al., 2013; Strijk et al., 2013). This theme offers deeper insights into the pathways of positive change from participating in the intervention and useful programme mechanisms that can facilitate transformation.

Participants' experiences demonstrated the value of careful structuring, supportive guidance, gradual progression, and variety (Lyubomirsky et al., 2005; Sheldon et al., 2013). Furthermore, these types of programmes need to be inclusive of everyone to avoid unintentional exclusion and discrimination that might result from strength-based PPIs (Held, 2004; Lomas, 2016; Täuber et al., 2018). The exploration of participants' experiences demonstrated that the different tools and mechanisms included in the yoga-based PPI could bring about positive changes conducive to well-being promotion to the benefit of individuals and organisations alike (Salanova et al., 2013).

6.1.4 Theme Four: Looking Ahead and Making it Work

The last theme speaks mainly to the programme's feasibility and the extent to which there is sufficient merit for it to be recommended as a valid strengths-based employee well-being promotion strategy. This theme comprises two sub-themes; the first illuminates particular aspects that contributed to the programme's success, while the second sheds light on factors that could be detrimental to such programmes' success and offers alternatives to consider for improving similar initiatives in future.

It should again be highlighted that the group involved in the 36-week yoga-based PPI was small in relation to the university's staff compliment, and attrition towards the end was substantial. This attrition could be because the programme was part of a controlled research project and not open for new intakes after the initial recruitment phase. There is, however, evidence that such programmes could draw greater interest over time if offered as a permanent workplace wellness initiative. Salanova et al. (2013) echoed that organisations should commit to a long-term mission of continuous and sustained effort to develop positive organisations with a healthy and resilient workforce. Participants' experiences of positive aspects and factors that support the feasibility of this yoga-based PPI are presented next.

6.1.4.1 A Viable Wellness Approach: Highly Recommended.

This sub-theme presents various aspects that support the feasibility of the programme—as highlighted by participants’ experiences—and particular aspects necessary for dedicated commitment, such as interest and personal motivation (also see Lyubomirsky et al., 2011; Ouweneel et al., 2013; Strijk et al., 2013).

Participants felt the programme was feasible and said they would highly recommend it as an employee wellness initiative. Participant 8 recommended the initiative based on her view that this type of wellness programme can have positive implications for organisational success:

I would really recommend it to all the employees at any time ... it's needed, to be honest. Especially in a setup like this one where we see students—and not even few students, a lot of students—and they all want to go here happy, and unfortunately, you cannot make all of them happy. Some will just come with their attitude and you need to calm them down, and I think if people can get this type of, um, training and be able to manage their emotions, I think we can go very far. (P8, female, age, 48)

In theme one, it was indicated how the programme tools helped participants manage the various stressors they experienced in their work environment. This extract further reiterates the value of the programme in the study context—serving as an emotional regulation strategy that helps to build supportive resources which can aid positive organisational outcomes such as service delivery—as proposed by Diener et al. (2020) in their model that linked positive emotions to positive organisational outcomes.

Participants expressed interest in continuing with the programme in the future and were hopeful that the initiative would become available permanently. Participant 3 explained:

If I can do it again, I'll do it the whole year, and repetition doesn't matter for me. It's something I would love to do ... It was really good, whilst it lasted, and I'm looking forward to HR actually continuing with it. (P3, female, age 43)

Continuous and sustained effort to promote employee well-being as a long-term mission is crucial for developing positive organisations (Salanova et al., 2013). Study participants expressed interest in partaking in such a long-term venture. They also mentioned that other colleagues expressed interest in the yoga sessions. Participant 9 stated:

People, yes, they wanted to come ... they saw us going there. But the problem was, it was already full, you see ... because of the research. I think people would still be interested, even men would still be interested. There were some men who wanted [to join—]who were talking about it. (P9, female, age 46)

As part of the research project, new interests could not be accommodated after the initial recruitment period. However, the evidence that other colleagues expressed interest in the programme after the recruitment phase suggests that there is potential for such a programme to grow over time as more employees become aware of the initiative.

Despite the high attrition rate, the fact that a small number of participants persevered through the entire programme is evidence that some employees are willing to make long-term commitments to workplace wellness initiatives. Participant 4 confirmed:

I think it's a feasible programme. Yah, I think it should be done ... There are people who started and went up to the end. I saw them at the beginning, and I saw them at the end of the year. (P4, female, age 64)

However, Participant 6 recognised that the future success of such initiatives would depend largely on adequate commitment and getting interested employees involved:

I think it is feasible, but you will have to get the people that are really interested involved in the classes. I think many people that started out doing it, were not really

interested ... and then they don't come back, and they didn't attend and whatever. But um, it is possible, you just need to get the right people there and then, I'm sure the commitment will be there. (P6, male, age 56)

Participant 4 stressed the necessity of organisational support as a critical factor for future feasibility. *"I think it's totally feasible if only, you know, we get ... help from the organisation"* (P4, female, age 53). Previous authors have emphasised the critical role of institutional buy-in as a key factor in the success of workplace wellness programmes (Ouweneel et al., 2013; Strijk et al., 2013). The previous extracts further demonstrate the necessity of organisational support in encouraging employee participation in well-being programmes.

Those participants who committed to the entire programme represented a minority who were highly motivated and disciplined. They expressed that they participated because they wanted to and were committed to seeing it through. *"I didn't need much motivation to come there, because I wanted to come"* (P3, female, age 43). Individual realisation that change requires conscious effort (see Lyubomirsky et al., 2011) is illustrated by the following extract from Participant 6:

I attended all the sessions that I could. The ones that I couldn't attend, well I didn't attend it for very specific reasons ... I also thought if you don't attend it, then you will not get the benefit. So, you have to actually do something, to get something ... if you did not commit and you did not attend, then you would not get the benefit. (P6, male, age 56)

These excerpts indicate that the success of running similar initiatives in future would largely depend on employee interest, motivation, and dedicated commitment. Previous research has shown that the amount of effort applied to intervention activities is directly

related to improved well-being (Lyubomirsky et al., 2011). The former quotations support the role of these attributes in cultivating sustained well-being in a workplace context.

Although personal motivation and willingness to commit are essential aspects for programme feasibility, participants also expressed that they were motivated by the progress and benefits they experienced over time. *“The motivation was—what I saw happening to me, that’s what motivated me—I had to push myself, based on the benefits that I was getting”* (P8, female, age 48). This motivation adds to the value of careful planning and structuring wellness programmes highlighted in the previous theme. Gradual progression and progress hold motivational benefits in and of themselves. As previously mentioned by Participant 3, if the physical practice is initially too challenging, employees might get discouraged and drop out before they get to experience the benefits of their endurance.

This sub-theme presented aspects that support the feasibility of offering this yoga-based PPI in workplace settings. Participants confirmed the necessity of commitment and personal motivation in employee well-being promotion, as proposed in the model for sustained happiness (see Lyubomirsky et al., 2011). However, institutional support and encouragement to involve interested employees have been highlighted as critical to promoting future initiatives (Bretland & Thorsteinsson, 2015). Although some participants might inevitably drop out after losing drive and motivation, the evidence suggests that involvement can grow over time and that long-term institutional investment in this type of wellness initiative could be worthwhile for building healthy organisational resources which hold benefits for employee well-being and promoting more positive experiences in the work environment (Diener et al., 2020; Salanova et al., 2013). The qualitative descriptions of dedicated participants’ motivation and commitment to the programme also offer unique insights into the role of critical aspects required for sustained well-being promotion, as

proposed by Lyubomirsky et al. (2011). Stumbling blocks and suggestions to overcome challenges to promote the success of future endeavours are explored next.

6.1.4.2 Making It Better: Potential Obstacles and Suggestions for Programme Success.

This sub-theme presents factors which could hamper employee interest and attendance and offer suggestions to promote greater success with future endeavours. Lessons learnt from running the current programme are useful to inform improvements for subsequent initiatives. Firstly, factors that could negatively influence the uptake of a yoga-based employee wellness programme are brought to light. Various obstacles that interfered with participants' committed attendance are highlighted. Finally, participants' suggestions to overcome the barriers that might hamper programme success are offered, and important aspects to consider for the future are mentioned.

Common misconceptions around yoga is a major factor that may initially prevent employees from getting involved in a yoga-based wellness programme. Many people think yoga has religious connotations or are under the impression that one must be fit and flexible to practice it (Belling, 2001; Desikachar, 1995). Participants confirmed these misconceptions and how they could prevent people from joining this type of initiative. Participant 2 highlighted religious connotation and the need to assure people that anyone can practice yoga regardless of their religious beliefs or affiliation. *"You have people like, 'oh, but I'm Christian; can I do it?'"* (P2, female, age 32). Another common misconception is, *"I'm not flexible. I can't do this?"* (P1, female, age 55). Participant 1 shared her initial apprehension when she started the programme:

When the first session started and [I] put on my little clothes to go there, I thought, yoh, I'm excited at [sic] the one hand, and I am scared at the other side [sic].

Because if they are going to expect me to bend like those photos that you see, aw, I'm

not going to do it ... at first I was really, I was scared—because I'm not as young as the other people—that I am not going to be so flexible, I'm not going to do this and so on. And especially when I had a back operation two years back [sic]. I am paranoid about my back, in the sense that I'm looking so good after my back, I don't want to hurt it. And if they are going to expect of me doing things, err, then I can't do it. (P1, female, age 55)

Participant 2 echoed the importance of informing people of the particular health benefits and how everyone can be accommodated. *“I feel like people will need more understanding of it ... of the benefits ... Especially ... people who have ailments”* (P2, female, age 32).

The purpose of the information seminar was to address misconceptions about yoga and offer assurance that anyone was welcome. The participants confirmed the need to share this type of information to promote greater involvement among those who might be hesitant to join because of their uncertainties. The seminar appears to have served its purpose, as a substantial group initially enrolled for the programme. Participant 7 expressed her amazement at the number of people who joined. *“I was surprised that how many people showed up ... [laughs] because any time you tell people something about yoga, they go like, ‘ooh, I don't follow that religion’. I tell them; no, it's not a religion [laughs]”* (P7, female, age 64).

Despite the surprising number of enrolments, the attendance data presented in the previous chapter indicated that participants' commitment to physical yoga sessions was a major challenge. Participant 10 commented, *“I was just disappointed with the turnout of people. Especially compared to the information session, there was a whole lot of colleagues there. But come session time, they were not there”* (P10, female, age 34). This finding is in line with previous research that reported low commitment and adherence to well-being intervention activities and high attrition (Michishita et al., 2017; Ouweneel et al., 2013; Strijk et al., 2013).

Various personal and work-related reasons were mentioned for missing sessions.

Participant 9 shared examples of both:

The only thing that made me not to be that committed last year was when I lost my mother ... I took about a month or two, being home—and I wasn't attending. And shortly after that, it was exams. And then, after the exams, now it's registration ... when we take leave, that's the only problem ... or when there are strikes, like the way we couldn't do certain things because there were strikes. (P9, female, age 46)

Staff training, meetings, work pressure, and commitments were other reasons given for missing sessions.

Some participants experienced tension with their superiors regarding their attendance.

Participant 2 shared how she was discouraged based on side remarks from one of her superiors:

One of the supervisors ... when we used to come up from the yoga, they used to complain ... I still wanted to come, but the whole—them saying, you know, 'oh you guys are going', and, you know, 'what is your target? Are you meeting it?'" (P2, female, age 32)

Participant 3 affirmed that attending the yoga sessions took slightly longer than her allocated lunch hour, which sometimes caused some tension and disapproval from managers. However, Participant 3 shared how she was able to address this through clear communication and reaching an understanding with her supervisor:

Because it was 15 minutes more than I allocated lunchtime, there was initially an issue. Err, but then I communicated to my manager that, you know, the yoga was happening and it's something within the (name of university) space, it was arranged with HR, and then people were fine. (P3, female, age 43)

The former extracts highlight that institutional support is a critical factor for successful employee wellness programmes and that insufficient managerial support can hamper programme attendance (also see Bretland & Thorsteinsson, 2015; Ouweneel et al., 2013; Strijk et al., 2013). Participant 4 reiterated the need for management structures to encourage and accommodate attendance of employee wellness activities actively. *“There is a strong need to build that [wellness activities] into our daily programme. But the managers don’t recognise that ... it’s not promoted”* (P4, female, age 53). Participant 5 highlighted the need to filter evidence-based research into organisational structures specifically to enhance managers’ understanding. *“Maybe ... by doing this research now, and the benefits are introduced to the, as I said, to the managers, it can maybe help”* (P5, female, age 42).

Others also stressed the importance of proper advertising and communication strategies necessary to build interest and promote involvement. *“I think it has great potential if it’s channelled properly ... Maybe if the employer sort of, err, makes the people aware”* (P2, female, age 43). It was indicated that many employees did not see the invitation to the research project that was advertised through the institutional communication channels. Participant 10 suggested that communication directly from the institutional wellness division would be a more effective way to advertise wellness initiatives to employees. *Communication from the Wellness section, just from them. ‘Cause anything from [name of electronic notices] you know it’s for the whole university ... But if it’s from one individual that we know deals with wellness, it will be easier”* (P10, female, age 34).

Participants also suggested promoting the initiative during the institutional Wellness Week to spread awareness and promote uptake. Participant 4 stressed the need to openly discuss mental health matters in the workplace—particularly from a strengths-based perspective, to help counter the stigma (Dobson et al., 2019). She suggested using Wellness

Day as an avenue to create greater awareness about mental health from a strengths-based perspective:

On Wellness Day itself that it is discussed, a positive spin to mental wellness. That it's openly discussed, that you start with mental wellness, which implies that there's also mental illness ... speaking about wellness in a positive way, helps us to open the space to speak about the negative things ... that strong demands on us, [and the need] to create balance ... that it is discussed openly ... But also the physical wellness, what it means to do yoga ... That there's public discussions about that and people can give feedback. (P4, female, age 53)

The need for more awareness around mental health and holistic wellness training was apparent—a need echoed by previous authors (Fenton et al., 2014; Salanova et al., 2013; Van den Bergh, 2000). Participant 5 suggested incorporating holistic wellness programmes as part of the official HR training courses. *“Maybe you can go to our training department, Human Resource Management, there's a huge gap there ... This is part of that personal wellness, all those programmes—because we've got the same courses every year”* (P5, female, age, 42).

Other key aspects to keep in mind when introducing similar employee wellness initiatives in future are offering sufficient opportunities to enhance greater attendance and the need for a conducive practice space. *“We need three times a week ... Your body gets stiff”* (P5, female, age 42). A private and tranquil space for the yoga practice with good ventilation was described as most desirable. *“The venue wasn't the right space ... maybe something ... a little more private, instead of the students walking past”* (P3, female, age 43). Participant 8 described additional requirements for future yoga-based wellness programmes in the work context. *“For the future, if maybe we can just get a very nice big space, well ventilated and stuff”* (P8, female, age 48).

In summary, organisational commitment and support to promote on-site workplace wellness initiatives have been stressed as vital factors for successful uptake and tangible impact of future ventures in the study context—which is in line with previous recommendations (Bretland & Thorsteinsson, 2015; Ouweneel et al., 2013; Strijk et al., 2013). Participants' reflections confirmed that stigma and misconceptions around yoga and its practice should be demystified when advertising and promoting yoga-based PPIs to ensure the programme is all-inclusive in its appeal and does not lead to unintentional discrimination (also see Täuber et al., 2018). Appropriate utilisation of communication channels and wellness days, as well as active managerial support and encouragement, should be leveraged to get interested employees involved and inspire the dedicated commitment required for the successful enhancement of well-being efforts (Lyubomirsky et al., 2011). Allocating a designated space suitable and conducive for the physical practice will portray an organisational commitment to long-term employee well-being promotion efforts. Novel contributions from this sub-theme include participants' unique reflections on various obstacles that hampered their commitment to the programme and suggestions to improve the success of future initiatives informed by their first-hand experiences.

Overall, the outcomes of the thematic analysis offer support for the value of the yoga-based PPI as a viable means to promote employee well-being holistically. Participants' experiences confirmed the growing concerns about workplace stress and its detrimental consequences on overall well-being, both on individual and organisational levels (Poalses & Bezuidenhout, 2018; Rana, 2015). Similar to other multi-component workplace wellness interventions (see de Bruin et al., 2020), the different programme tools can offer a variety of well-being benefits with application value and relevance across life domains. Based on the thematic analysis' findings, this programme could be recommended as a plausible long-term strategy for greater organisational performance, benefiting employees and organisations alike

as it serves as a protective resource against stress and promotes various aspects of employee well-being (Spreitzer & Hwang, 2019; Stelzner & Schutte, 2016). However, dedicated organisational support and commitment on a long-term basis would be essential as programme uptake and continued commitment were limited in this study. Recommendations for best practices and addressing possible obstacles faced in future initiatives were drawn from participants' direct experiences.

6.2 Content Analysis

As highlighted in the thematic analysis, findings from the qualitative content analysis offer additional validation of the need and value of the yoga-based PPI in the study context. Data from open-ended questions included in the electronic questionnaires shed further light on the need for the programme and the application value of the programme tools in relation to well-being promotion. These insights are based on the main reasons participants gave for joining the programme, the stressful experiences they reported throughout the study period, and descriptions of how programme tools were applied in everyday life to enhance a sense of well-being. Each of these is discussed in turn.

6.2.1 *Reasons for Joining the Yoga-based PPI*

Participants were asked to provide two main reasons for joining the programme in the baseline questionnaire. All 46 participants who responded to this questionnaire gave two reasons. A total of 97 codes were assigned to the reasons provided. Grouping of the codes produced four broad categories (see Table 6.1) that represent participants' reasons for joining, namely, health (n = 41), well-being (n = 19), development and growth (n = 16), and stress management and relaxation (n = 20).

Table 6.1*Categorisation of Participants' Reason for Joining the Programme*

Category and sub-categories	n	%
Health	41	42,3
Health promotion	19	
Physical activity/Exercise/Fitness	19	
Weight loss	3	
Stress management and relaxation	20	20,6
Stress relief	12	
Relaxation	8	
Well-being	19	19,6
Well-being promotion	11	
Benefits associated with yoga	6	
Spiritual reasons	2	
Development and growth	16	16,5
New experience	9	
To learn about yoga	7	
Other	1	1,0
Workplace programme involvement	1	

Note: N = 97 (number of codes). Percentages indicate a breakdown of the main categories.

Health reasons (42.3%) represent the largest portion of the main categorisations. It comprises reasons to promote health in general (*“To improve my general health”*; *“Physical health”*), and target more specific issues (*“Assist with breathing problem”*; *“bronchiolitis”*; *“Because I was starting to develop chest pains”*). The desire to be physically active, promote fitness, improve flexibility, build strength, and reduce weight are also clustered under this category.

The well-being category (19.6%) represents reasons for the promotion of well-being in general (*“To help promote my well-being”*) and well-being benefits associated with the practice of yoga (*“Yoga's physical and mental benefits”*). Spiritual reasons (*“To connect with God”*) are also included here.

Development and growth (16.5%) comprise aspects related to new experiences, learning and personal development. Statements such as *“exposure”*, *“learning and*

development”, “*new adventure*”, “*curiosity*”, and “*inquisitiveness*” indicated participants’ desire for personal growth, while others mentioned they wanted to learn more about yoga and meditation specifically (“*To learn more about the importance and advantages of yoga*”).

Stress management and relaxation (20.6%) include general references made to manage stress levels (“*To release stress and tension*”) and in the workplace specifically (“*stress experienced at work*”) and to relax body, mind, and spirit (“*Body relaxation*”; “*To relax mind and spirit*”).

Overall, these findings reflect that participants signed up mainly to target physical health and other aspects related to well-being and self-improvement. Using the programme to deal with stress and its negative consequences did not feature as prominently in their initial motivations for joining the yoga-based PPI. This finding is contrary to the thematic analysis findings, which highlight stress as the main motivation for joining the programme.

6.2.2 Sources of Stress

Participants’ descriptions of negative events experienced over the entire data collection period (baseline to post-intervention follow-up) reflect additional sources of stress experienced. These descriptions were coded and produced 64 codes clustered into two broad categories: personal (84.4%) and work-related stressors (15.6%). Table 6.2 below shows a breakdown of this categorisation.

Table 6.2

Additional Stressors Experienced

Category and sub-categories	n	%
Personal stressors		
Death of loved one	15	23,4
Personal stressful experience	10	15,6
Sense of failure	9	14,1
Family responsibility	8	12,5
Emotional difficulty	5	7,8
Health issues	4	6,3
Interpersonal conflict	2	3,1

Category and sub-categories	n	%
Family conflict	1	1,6
Work-related stressors		
Work demands/conflicts	10	15,6

Note: N = 64 (number of codes). Percentages indicate a breakdown of the sub-categories.

Regarding personal stressors, a major portion represents the loss of loved ones, both family members and close friends. A variety of personal problems, such as having an accident, home maintenance issues, and falling victim to a scam, represent general personal stressful experiences. Many instances were also mentioned that indicated a personal sense of failure. This ranged from failing exams, not achieving personal goals, and missing yoga sessions. Family matters, such as feeling heavily burdened by family responsibility and conflict, also contributed substantially to stress. Emotional difficulties, health issues, and interpersonal conflict featured to a lesser degree. Some examples of work-related stressors include heavy workloads, pressure to meet deadlines, union interference in work processes, and difficult relations with superiors.

Additional stressors identified from the content analysis indicate that most negative experiences perceived as stressful were from the personal life domain. This finding is contrary to the greater emphasises on work-related stress highlighted in the thematic analysis. Triangulation of the content and thematic analysis data demonstrate that study participants experienced substantial amounts of stress from both work and personal life domains.

6.2.3 Application Value of the Programme Tools

In the post-intervention follow-up questionnaire, participants reflected on how using the different programme tools assisted them in their everyday lives. Seven of the 13 participants who responded to this questionnaire offered reflections. A total of 20 codes were categorised into three broad categories indicating mental (35%), physical (35%), and emotional well-being (30%) benefits derived from applying the programme tools following

the conclusion of the 36-week intervention. Table 6.3 shows a breakdown of the main categories.

Table 6.3

Categorisation of Programme Tools Application Value

Category and sub-categories	n	%
Mental benefits	7	35,0
Mental focus	3	
Clarity of thought	2	
Mindfulness	2	
Physical benefits	7	35,0
Relaxation	5	
Physical health	2	
Emotional benefits	6	30,0
Emotional regulation	3	
Positivity	3	

Note: N = 20 (number of codes). Percentages indicate a breakdown of main categories.

These findings closely correspond with the reported benefits derived from both the theoretical and physical programme components reflected in the thematic analysis. The relatively equal weighting of the three categories indicates an even distribution of these benefits, although there was no indication of social well-being benefits in the content analysis. Keeping in mind that the ten participants interviewed also responded to the follow-up questionnaire, the strong validation of the benefits illuminated in the thematic analysis, except for social well-being gains, is not surprising.

The overall reflection from the content analysis highlights that participants' motivations offered for joining the programme in the electronic questionnaire reflect more positive, proactive reasons than negative reactive reasons—which is more salient in the thematic analysis. The reflections of negative experiences offered throughout the study confirm that stress is experienced from both work and personal life domains. Applying the different programme tools holds physical, mental, and emotional well-being benefits that can help to better deal with various life demands and promote a greater sense of well-being.

6.3 Chapter Summary

Qualitative findings that more intimately reflect participants' lived experiences of participating in the 36-week yoga-based PPI and how it impacted their sense of well-being were presented in this chapter. The thematic analysis demonstrated that the intervention served as a viable workplace well-being promotion initiative in the study context. Theme one provided the backdrop of what was happening in participants' lives when the programme was introduced and showed how it helped them manage many of their stressors better. Theme two illuminated the range of well-being benefits derived from the different programme components. In addition, theme three offered unique insights into the particular structure and implementation strategy taken to deliver the programme and how it supported positive change and transformation pathways. Theme four presented evidence to support the feasibility of using a yoga-based PPI to target employees' well-being but emphasised that the success of such initiatives requires strong organisational support, personal motivation, and long-term commitment from employees. The content analysis further supported these outcomes and emphasised that participants were motivated to join the initiative to target stress from work and personal life-spheres to enhance their well-being.

The next chapter offers an overall integration of the quantitative and qualitative outcomes to reflect on the study's unique contribution to the existing body of knowledge. In conclusion, particular limitations and strengths of the research approach are highlighted, and future recommendations are informed by the lessons learnt from the current project.

7 Chapter Seven: Conclusion, Limitations, and Recommendations

The overall study outcomes that reveal the efficacy and feasibility of using yoga as a workplace PPI aimed at employee well-being promotion are presented in this chapter. Concluding remarks are presented in a final discussion informed by the quantitative and qualitative findings. This is followed by the limitations of the study and related recommendations for future research and practice.

Workplace well-being offers important organisational benefits in the modern-day climate of increasing stress and its detrimental impact on mental and physical health (Grant & McGhee, 2020; Spreitzer & Hwang, 2019). The existing body of knowledge highlights a predominant reactive approach to employee wellness in the South African context (Naicker & Fouché, 2003; Patel et al., 2013; Sieberhagen et al., 2011). Proactive approaches—focused on building strengths to help employees flourish—are advocated as more favourable alternatives. These approaches are inherently more inclusive and consequently counter the stigma commonly associated with reactive strategies—which cater exclusively to employees experiencing some form of distress (Dobson et al., 2019; Salanova et al., 2013; Stelzner & Schutte, 2016).

In light of the identified research gap, this study explored and described the effectiveness and feasibility of using a yoga-based PPI to promote employee well-being at a local HEI as a holistic approach to workplace wellness by combining mental and physical components in a single programme. A quasi-experimental mixed methods design was employed, using a purposive sample, as the most suitable approach to address the overarching research aim. The main outcomes obtained from the quantitative and qualitative design strands and the intervention phase are presented next. The unique contributions this study makes to existing literature are highlighted.

7.1 Concluding Discussion

The study was situated in the positive psychology paradigm with a focus on holistically promoting employee well-being by using yoga to present a workplace PPI. A purposefully selected HEI was targeted for the study context. The contextual focus was informed by the paucity of local literature on long-term strength-based workplace wellness interventions in these settings. Increasing levels of stress and strain experienced by employees in this sector, and its important role in societal development through education, justifies the implementation of evidence-based workplace wellness programmes for personnel in South African HEIs (Field & Buitendach, 2011; Motala & Menon, 2020; Poalses & Bezuidenhout, 2018; Van Straaten et al., 2016). The research set out to design and implement a 36-week yoga-based PPI and explore its effectiveness and feasibility as a long-term employee wellness strategy in the specified context.

Overall, the study outcomes support that the yoga-based PPI can be recommended as a holistic strengths-based strategy to promote well-being amongst employees working at the selected HEI. However, programme feasibility rests on strong organisational support in advertising the initiative and encouraging and enabling employees to attend regularly. The subsequent discussion unpacks the key study findings. Using yoga as a tool to present a holistic workplace PPI is discussed next, followed by a discussion of the effectiveness and feasibility of the programme. Reflexivity is interwoven in these discussions as a measure to enhance the trustworthiness of the study outcomes (Blythe et al., 2013; Shenton, 2004).

7.1.1 *Yoga as a Holistic Workplace PPI*

Lyubomirsky et al. (2005) proposed that intentional activity—using appropriate tools and strategies—is the best way to nurture sustained well-being. Based on my personal experience of using yoga as a tool to promote my sense of well-being, along with the wealth of scientific back-up for its effectiveness (Kishida et al., 2018; Meneze et al., 2015; Pascoe et

al., 2017; Woodyard, 2011), yoga was identified as the appropriate intentional activity of choice. Moreover, the model by Lyubomirsky and colleagues also prescribed key factors critical for successful well-being outcomes through deliberate intention—factors such as person-activity fit, optimal timing, a variety of activities, positive habits, and sustained effort. Their model was therefore selected as an appropriate theoretical underpinning to inform the design, structure, and implementation of the yoga-based PPI.

The practice of yoga entails using various techniques—such as virtuous living and disciplined conduct, practising physical postures, breathing techniques, relaxation, and meditation—which should be practised with dedication and adopted as a way of life to maintain a state of holistic well-being. The different yoga-based tools combined in the theoretical and physical programme components offered a variety of behavioural, cognitive, and volitional activities to target well-being holistically. A variety of positive habits and wellness-promoting concepts were presented using the lessons comprising the theoretical component. These were regularly introduced over time. The physical programme component was structured to honour the yogic principle of gradual progression and timed repetition, which inherently served to counter adaptation effects detrimental to well-being promotion through intentional activities (Sheldon et al., 2013).

Participants' perceptions and experiences—reflected in the semi-structured interviews—illuminated the value of the particular programme structure and implementation adopted for this yoga-based workplace PPI and the different tools included to promote their sense of well-being from a strengths-based perspective. The programme comprised both a theoretical and practical component to offer a holistic approach to well-being promotion. Theme two of the thematic analysis demonstrated that the yoga principles of the yamas and niyamas along with the physical practice sessions and respective tools it comprised, enabled participants to practice a variety of well-being behaviours and concepts such as kindness,

compassion (for self and others), patience, acceptance, and being more mindful and optimistic in one's outlook. Optimism aids in positive coping with stressful life events, which is instrumental for maintaining well-being (Chang et al., 2020). However, relatively poor commitment to the theoretical component reflected in the adherence statistics highlights the need and value of offering reflections on the lessons and concepts during the physical practice sessions. Some participants mentioned that they struggled to find time to read the lessons themselves but valued the various facilitators' reflections as they helped deepen their understanding of the different concepts based on multiple perspectives. This viewpoint demonstrated individual differences in personal commitment and motivation to well-being and the need for a design which accommodates these differences.

Participants' experiences of the practical component illuminated the value of gradual progression and repetition of sequences. They commented on how the programme implementation gradually prepared them for the more challenging Sun Salutations (Surya Namaskar). The progressive structure also ensured greater inclusivity, accommodating beginners and advanced practitioners. This structure created a sense of acceptance and inclusion among participants, encouraging them to try more advanced postures and practices. Creating this sense of inclusivity is important to break the misconception that one must be fit and flexible to practice yoga. The value of repeating the sequences is that it offered an opportunity to commit the postures and sequences to memory and allowed for repeated practice required for progress and mastery. Participants also mentioned how they appreciated that facilitators could accommodate everyone according to their unique needs and abilities. This approach highlighted that passionate, caring facilitators play a key role in practitioners' wellness journey and is instrumental in encouraging personal growth and transformation, as depicted in theme three of the thematic analysis.

Participants' experiences of using various yoga techniques to enhance their sense of well-being showed that the programme tools and structure aided the building of valuable psychological and emotional resources that created a sense of improved well-being in participants' work and personal lives. The findings support this yoga-based PPI as a holistic workplace wellness programme that includes all employees and focuses on long-term well-being promotion from a strengths-based perspective. Moreover, the study sample included different population groups, which supports the cultural applicability of this wellness programme in the South African context. The programme design and implementation blueprint contribute uniquely to the body of knowledge on workplace wellness promotion by recommending the use of yoga in presenting a workplace PPI.

7.1.2 The Effectiveness and Feasibility of a Yoga-based PPI for Employee Wellness Promotion

The positive psychology concepts included in the theoretical framework informed the different positive and negative indicators, including mental health, work engagement, positive and negative emotions, and perceived stress, with which to measure the effects of the yoga-based PPI as a long-term employee wellness promotion strategy. The selected indicators represent a combination of personal and organisational relevant well-being factors, as wellness promotion should appeal to employees on a personal level to motivate their commitment and also offer a worthwhile return on investment on an organisational level to justify the offering (Salanova et al., 2013; Spreitzer & Hwang, 2019; Stelzner & Schutte, 2016).

Both quantitative and qualitative findings showed that participation in this type of workplace wellness initiative helped to reduce perceived stress and negative emotions that are detrimental to flourishing mental health. Theme one of the thematic analysis demonstrated the various stressors employees could experience in HEIs and how stress was a big motivator

to join the yoga-based PPI in the study context. In addition, information reflected through the content analysis demonstrated that employees experience a range of personal and work-related stressors that negatively affect well-being. Cancelled sessions—caused by external factors such as staff and student strike action—offer further evidence of the disruptions experienced by employees in the higher education sector. Participants described the negative impact—both on emotional states and work performance—of such disruptions in the interviews. This study thus offers further support for the ever-growing concerns about the numerous factors that threaten employee well-being in the local higher education context (see for example Barkhuizen et al., 2013; Poalses & Bezuidenhout, 2018) and the consequent need to offer appropriate workplace wellness programmes to counter these.

Theme two of the thematic analysis depicted how the programme helped improve different aspects of participants' well-being, how it assisted with managing stress and even enhanced the performance of work duties. The significant increases observed for the vigour aspect of work engagement from the quantitative strand offer support that the programme can have positive implications for work performance. The repeated measures analysis suggests that this was enabled through enhanced emotional well-being. Although qualitative accounts indicated that some participants experienced better focus and concentration after the physical yoga practice sessions, the quantitative strand did not fully support enhanced absorption in work duties. Overall, the study results show that this yoga-based PPI can function as a lunchtime recovery programme that can enhance employee well-being, in line with findings reported by Sianoja et al. (2018).

The application of the different programme tools offered a combination of emotional, mental, and physical benefits, as evident from the thematic and content analyses. Although only limited support was found for the programme's effect on positive emotions and psychological and social well-being in the quantitative analysis, qualitative accounts offer

evidence that the programme could also positively impact these indicators. Based on an integrated interpretation of the quantitative and qualitative findings, it can be concluded that the yoga-based PPI, through the theoretical and physical components, can promote both hedonic and eudemonic well-being dimensions. While the quantitative strand offered some support for enhancing hedonic aspects, qualitative descriptions of participants' experiences also reflected positive implications for eudemonic dimensions of personal growth and positive transformation. Theme three described how the programme structure and implementation strategy offered a scaffolding for transformation and growth. Participants reflected on changes they observed in their way of being in the world and how they related more positively to themselves and others.

It has to be considered that the non-significant increases in certain outcome variables could be a consequence of the limited statistical power of the small samples and insufficient commitment by participants. Lyubomirsky et al. (2011) indicated that sufficient effort is essential to bring about substantial well-being outcomes. The reported attendance and adherence patterns demonstrated high commitment and motivation from a relatively small group of participants, which could also have contributed to the non-significant findings. While the attendance statistics indicated that a small number of the research participants were highly committed and attended regularly, the qualitative finding illuminated the various reasons and challenges for missed sessions—offering deeper insight and understanding of factors that hampered commitment. Although not directly reported, a lack of person-activity fit, motivation, and dedication could have contributed to the high attrition and poor overall commitment. It should be noted that participants who dropped out throughout the study were not consulted for their reasons or asked to reflect on their experiences of participating in the yoga-based PPI.

The general trends observed in the descriptive statistics indicated that positive indicators mainly increased and negative indicators decreased throughout the 36-week PPI. However, these trends were not sustained after the programme had ended. Even though a small number of participants indicated that they had continued using the programme tools in the post-intervention period, this trend suggests that continuous opportunities to engage in the workplace wellness programme, including the lunchtime yoga session, seem critical for sustained well-being promotion efforts.

Theme four of the thematic analysis provided key insights into the long-term feasibility of offering a workplace yoga wellness programme in the South African higher education context. The study outcomes indicated that such programmes could be feasible provided they were well advertised, and great efforts were made at the organisational level to promote successful uptake. Poor commitment and high attrition were highlighted in the current study. As mentioned in the introductory chapter, the primary inspiration that sparked this workplace wellness initiative derived from personal accounts of people not finding time to attend regular yoga sessions at studios—despite the growing interest and desire to practice yoga to counter stress and anxiety. Study participants echoed busy schedules and limited time available after work as reasons preventing them from exploring and/or committing to a yoga practice. Theme one indicated that participants valued the accessibility of the programme—the convenience of having access to on-site lunchtime yoga sessions. Having only two participants from the off-site campus in the programme offers further support that accessibility is a key aspect to encourage participation and promote programme uptake. Although offering such strengths-based wellness approaches within workplace settings during lunchtime is a strategy to encourage greater commitment through the ease of access during the workday, additional organisational support is instrumental to promote and enable regular attendance (as reflected through the high attrition and overall poor commitment).

Strong and active organisational support is essential to ensure future initiatives' long-term success. Such support can take the form of encouragement from supervisors and line managers and acknowledging participation in wellness promotion activities in employees' performance appraisals. Moreover, organisational support could be demonstrated by having a suitable space for the physical yoga sessions exclusively dedicated to the wellness programme. Having such a dedicated space within the workplace shows organisational commitment to care for employees' well-being and create a type of sanctuary to recharge and recover from job demands during the workday.

The participants also identified adequate advertising and sharing sufficient information on the holistic benefits of a yoga-based PPI as a necessary tactic to demystify stigma and misconceptions around yoga and to promote greater inclusivity and uptake. Advertising the programme as a strengths-based initiative for employee wellness promotion is also a strategy for greater inclusivity and uptake as it counters the stigma associated with reactive approaches. Participants' proactive and reactive reasons for joining the programme offer further support for the inclusivity value of a holistic yoga-based PPI to promote employee well-being and the importance of strategic advertising approaches.

The thematic analysis offered evidence of growing interest among staff. It must be noted that the controlled environment required for scientific enquiry does not represent an actual "real world" scenario. The present study proposes that attendance might grow over time if all employees are free to enter the programme on an ongoing basis. The attendance statistics suggest that some might drop out over time, but qualitative accounts revealed that new employees are likely to take up the programme. This offers further motivation to pursue the programme on a longer-term basis. A long-term offering would permit more time for employees to become aware of the initiative and allow sufficient time to participate. However, personal motivation and willingness to commit to regular attendance cannot be

discounted when considering the future feasibility of successful uptake. The small group of dedicated participants offer evidence that this uptake is likely, and there is a potential for positive contagious effects to occur over time to aid growing interest and uptake.

Although the current study and its contributions are empirical, some theoretical implications are worth mentioning. The findings support Lyubomirsky et al.'s (2005) model of sustained well-being in that person-activity-fit and personal commitment to well-being promotion are key aspects for the successful impact of workplace PPIs in the South African context. Participants mentioned the value they experienced from starting the physical practice from where they were (in terms of fitness and flexibility, which also fosters inclusivity) and being accommodated by the wellness facilitators who were able to guide individuals according to their unique needs. The importance of personal commitment for the successful impact of workplace PPIs is apparent from the poor attendance and adherence statistics which offer possible reasons for insignificant findings on some of the outcome variables.

Furthermore, the differential impact found for mental health components supports that the three dimensions—emotional, psychological, and social well-being—are distinct. A possible reason for the sustained significant impact found on emotional well-being could be the practical nature of activities included in the physical component of the yoga intervention. Physical activity, deep conscious breathing, guided relaxation and mindfulness have more immediate and direct effects on relieving stress and balancing emotions (Edries et al., 2013; Edwards & Beale, 2011; Ferreira-Vorkapic et al., 2018; Lutz, 2014; Moszeik et al., 2020) than the behavioural changes targeted in the theoretical lessons. Another possible reason for the minimal impact found on psychological and social well-being dimensions could be because the theoretical component—which is arguably targeted more at these aspects of well-being—required even more commitment and opportunities for practical applications. A possible strategy to enhance adherence and, consequently, the impact of the theoretical components is

to include additional group contact sessions to introduce and present the lessons and discuss the contents in a group setting. Moreover, practical assignments could be linked to the theoretical component to make it more accessible and create opportunities for continuous use. This adjustment could further aid understanding of the concepts presented in the lessons and encourage greater engagement with the theoretical component. The final theoretical contribution worth mentioning is the novel “packaging” of yoga as a workplace PPI to promote employee well-being in the South African context. As far as the researcher could ascertain, this study is the first to use yoga as a tool for a workplace PPI to enhance employee well-being holistically in the local context. The yoga intervention can be adapted for use in both PPI research and other workplace wellness programs in the South African context.

In conclusion, offering this type of yoga-based PPI can serve as a viable means to promote hedonic and eudemonic aspects of workplace well-being. However, personal commitment and motivation of employees, as well as active organisational support, are required for successful long-term outcomes. The yoga-based PPI designed for the current study offers a viable blueprint to use in other settings for promoting employee wellness from a strengths-based perspective in addressing both proactive and reactive motivations for targeting employee well-being in the South African context.

7.2 Study Limitations and Recommendations for Further Research

A critical reflection on the limitations of the quantitative and qualitative design strands is provided to empower the reader to make an informed decision on the merit of the main outcomes and concluding remarks presented in the preceding discussion. Strategies for mitigating the identified limitations are reviewed, and related recommendations are made.

The limitations inherent to the quasi-experimental design and the use of a non-random purposive sample are considered first. Due to the inability to control extraneous variables' influence, there is a possibility that findings based on the quantitative analysis were partly

influenced by factors other than participation in the yoga-based PPI (Barns, 2019; Gravetter & Forzano, 2009). Participants were asked to reflect on and report whether they felt positive and/or negative experiences they had encountered in their everyday lives could have influenced their response to the questionnaires to account for this influence. As indicated, participants reported such factors, and it is unclear to what extent factors other than programme participation impacted the outcome variables. However, qualitative accounts of participants' experiences of participating in the wellness initiative and using the programme tools to enhance their sense of well-being confirmed that the programme positively contributed to the enhancement of well-being. Furthermore, although it was demonstrated that using a non-random purposive sample was justified for this particular exploration, a control group could not be formed to offer stronger support for the effects of programme participation on the selected outcome variables.

High attrition and small sample size negatively impacted statistical power and could have contributed to the non-significant results observed for certain outcome variables (Barns, 2019; Field, 2009). This is in line with findings from other workplace intervention studies (Keeman et al., 2017; Ouweneel et al., 2013; Strijk et al., 2013). It is also possible that the limited commitment and adherence to the programme components, as reported for most of the study participants, were insufficient to cause substantial gains in well-being. The current study did not account for the influence of commitment and adherence on the outcome variables.

The inclusion of the qualitative strand—which offered valuable subjective accounts of participants' lived experiences of participating in the yoga-based wellness programme—enabled deeper insight into the value and feasibility of the study intervention as a means to promote employee well-being in a local HEI. However, most participants ($n = 10$) who were interviewed were highly committed. Only two interviewed participants attended less than 50

per cent of the yoga sessions (43.8% and 46.9%, respectively). The rest attended more than 60 per cent of the sessions, of which five attended over 80 per cent. Although the qualitative findings offered unique and valid personal experiences, it should be noted that the subsample could have been biased. The findings can, therefore, not be generalised to the larger population or other contexts. Qualitative accounts nevertheless have transfer value (Noble & Smith, 2015). The in-depth description of the research context and study sample enables comparisons and distinctions to be drawn with other settings and samples. The rich descriptions offered using the quotations included in the thematic analysis aided a deeper understanding of how participating in the programme and using the different programme tools impacted participants' sense of well-being.

The researcher fulfilled multiple roles (as a researcher, programme coordinator, and wellness facilitator) and thus had a unique position in the study. While the intimate positioning offered valuable insights and a deeper understanding of the research process and the experience of implementing this yoga-based PPI, the potential influence of personal bias in the construction of the qualitative findings should be kept in mind. Moreover, although the researcher conducted the semi-structured interviews with the necessary background and unique understanding of the process, social desirability bias of participants' responses was also possible (Barns, 2014, 2019; McBride et al., 2018).

Considering these limitations, replication of the research in other HEIs would shed further light on using this yoga-based PPI in the local context as a feasible approach to promote employee well-being from a strengths-based perspective. Future initiatives, including a larger sample, a control group and more objective outcome measures—such as objective performance indicators and impact on absenteeism—could strengthen support for the value of the programme on an organisational level. Objective measures of life events could also be included as control variables.

The current study offers sufficient justification to recommend using this yoga-based PPI on a longer-term basis to further explore its feasibility and effectiveness as a holistic and inclusive employee well-being promotion strategy. Running this wellness programme on a three- to five-year cycle would allow more time to overcome the limitations associated with the limited recruitment period observed in the current study. It is also advisable to allow employees to join the programme throughout the cycle to explore growing interest and commitment over time. On-going advertising through official institutional communication channels should be utilised to encourage greater uptake. Information seminars on the value of using yoga for holistic well-being promotion could be presented at annual Wellness Days. Top and middle management should be encouraged to take part in the initiative and enable staff to attend regularly—for example, not scheduling meetings that clash with the lunchtime yoga sessions.

The level of commitment and time involved in the programme could be explored for mediating effects, and outcome measures could also be tested among non-participating employees serving as controls. It would also be important to explore reasons for dropout and poor commitment. Exploration of the proposed long-term initiative is required to further substantiate the value and feasibility of a yoga-based PPI as an effective strategy to promote employee well-being in the South African higher education context.

In conclusion, this study demonstrated that this yoga-based PPI could be recommended as a long-term strategy for organisational well-being through holistic employee wellness promotion. The design and implementation blueprint validated by the current findings hold evidence-based implications for employee wellness practices in the local context. However, the identified study limitations and inability to generalise these findings to other HEIs or workplace settings require further exploration. Supporting the effectiveness and

feasibility of using this PPI for long-term employee wellness promotion in other contexts would further inform employee wellness policies.

7.3 Chapter Summary

This final chapter offered concluding remarks drawn from an integrated discussion informed by the outcomes of both qualitative and quantitative design strands and the intervention phase. The study supports the endorsement of this yoga-based PPI as a viable strategy to promote employee well-being in the local context. The identified limitations and lessons learnt from the research initiative informed recommendations for future initiatives. Additional exploration in other contexts could further substantiate the promotion of employee well-being using a yoga-based PPI. The climate of growing stress and the strain of modern-day living calls for inclusive and holistic approaches to workplace well-being promotion. The current study provides evidence-based support to inform strength-based employee wellness practices in the South African higher education context.

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8 Appendices

8.1 Appendix A: Research Project Advertisement

Promoting Wellness in the Workplace with Yoga Science



Research participants needed

Workplace Wellness

Yoga as a Positive Psychology Intervention for Employees in a South African Higher Education Institution

Join a workplace wellness programme that targets physical, mental, and behavioural aspects of well-being. Learn a set of practical skills to ease physical and mental tension, and cultivate a better relationship with yourself and others to enhance your general sense of well-being.

Take up an opportunity to promote your well-being through self-improvement. Enrol in a 36 week yoga-based wellness promotion programme in your workplace. You will learn and practice yoga principals such as goal setting, non-judgemental acceptance of where you are, patience, tolerance, and gradual progression, non-comparison/non-competitiveness.

Approach Wellness through Yoga

Change requires effort. The programme will consist of 12 theoretical lessons that will suggest practical ways to enhance well-being in everyday life and two 1-hour lunchtime yoga session per week that will teach you the following basic techniques:

- Deep rhythmic breathing
- Physical yoga poses
- Relaxation techniques
- Focused attention and mindfulness

Interested participants should meet the following criteria:

- Be employed at Unisa until 31 December 2019
- Be willing to commit to all research activities (intervention activities, completing questionnaires, participate in an interview)
- Be physically capable to participate in physical activity

Interested employees can contact Leana at yogawellnessinfo@gmail.com or 079 1920 220 for more information.

Come hear more about the programme and the study at the information seminar and meet the teachers on 04 April between 12:00 and 13:00 or 13:00 and 14:00.

More info on the benefits of yoga: <https://uplift.tv/2017/yoga-changes-cellular-biology/>

**Your health is your wealth
Taking care of your body and mind is your responsibility
Commit your efforts to self-improvement**

8.2 Appendix B: Programme Implementation Timetable

Week	Date	Lesson	Teacher	Date	Lesson	Teacher
01	Tue 16 Apr	01 Pawanmukta 1	Leana	Thu 18 Apr	02 Pawanmukta 1	Christine
02	Tue 23 Apr	03 Pawanmukta 1	Leana	Thu 25 Apr	04 Pawanmukta 1	Bev
03	Tue 30 Apr	05 Pawanmukta 2	Leana	Thu 02 May	06 Pawanmukta 2	Christine
04	Tue 07 May	07 Pawanmukta 2	Ravi	Thu 09 May	08 Pawanmukta 2	Bev
05	Tue 14 May	09 Pawanmukta 3	Leana	Thu 16 May	10 Pawanmukta 3	Christine
06	Tue 21 May	11 Pawanmukta 3	Ravi	Thu 23 May	12 Pawanmukta 3	Bev
07	Tue 28 May	13 Pawanmukta 1-3	Leana	Thu 30 May	14 Pawanmukta 1-3	Christine
08	Tue 04 Jun	15 Pawanmukta 1-3	Ravi	Thu 06 Jun	16 Pawanmukta 1-3	Bev
09	Tue 11 Jun	17 Surya Namaskara prep	Leana	Thu 13 Jun	18 Surya Namaskara prep	Christine
10	Tue 18 Jun	19 Surya Namaskara prep	Ravi	Thu 20 Jun	20 Surya Namaskara prep	Bev
11	Tue 25 Jun	21 Surya Namaskara prep	Leana	Thu 27 Jun	22 Surya Namaskara prep	Christine
12	Tue 02 Jul	23 Surya Namaskara prep	Ravi	Thu 04 Jul	24 Surya Namaskara prep	Bev
13	Tue 09 Jul	25 Surya Namaskara prep	Leana	Thu 11 Jul	26 Surya Namaskara prep	Christine
14	Tue 16 Jul	27 Surya Namaskara prep	Leana	Thu 18 Jul	28 Surya Namaskara prep	Bev
15	Tue 23 Jul	29 Surya Namaskara prep	Bev	Thu 25 Jul	30 Surya Namaskara prep	Christine
16	Tue 30 Jul	31 Surya Namaskara prep	Leana	Thu 01 Aug	32 Surya Namaskara prep	Cancel
17	Tue 06 Aug	33 Pawanmukta 1-3	Leana	Thu 08 Aug	34 Pawanmukta 1-3	Christine
18	Tue 13 Aug	35 Pawanmukta 1-3	Ravi	Thu 15 Aug	36 Pawanmukta 1-3	Bev
19	Tue 20 Aug	37 Pawanmukta 1-3	Leana	Thu 22 Aug	38 Pawanmukta 1-3	Christine
20	Tue 27 Aug	39 Pawanmukta 1-3	Leana	Thu 29 Aug	40 Pawanmukta 1-3	Bev
21	Tue 03 Sep	41 Pawanmukta 1-3	Leana	Thu 05 Sep	42 Pawanmukta 1-3	Christine
22	Tue 10 Sep	43 Pawanmukta 1-3	Christine	Thu 12 Sep	44 Pawanmukta 1-3	Bev
23	Tue 17 Sep	45 Pawanmukta 1-3	Leana	Thu 19 Sep	46 Pawanmukta 1-3	Christine
24	Tue 24 Sep	47 Pawanmukta 1-3	Holiday	Thu 26 Sep	48 Pawanmukta 1-3	Bev
25	Tue 01 Oct	49 Surya Namaskara	Leana	Thu 03 Oct	50 Surya Namaskara	Christine
26	Tue 08 Oct	51 Surya Namaskara	Ravi	Thu 10 Oct	52 Surya Namaskara	Bev
27	Tue 15 Oct	53 Surya Namaskara	Leana	Thu 17 Oct	54 Surya Namaskara	Christine
28	Tue 22 Oct	55 Surya Namaskara	Strike	Thu 24 Oct	56 Surya Namaskara	Strike
29	Tue 29 Oct	57 Surya Namaskara	Leana	Thu 31 Oct	58 Surya Namaskara	Christine
30	Tue 05 Nov	59 Surya Namaskara	Christine	Thu 07 Nov	60 Surya Namaskara	Bev
31	Tue 12 Nov	61 Surya Namaskara	Leana	Thu 14 Nov	62 Surya Namaskara	Christine
32	Tue 19 Nov	63 Surya Namaskara	Ravi	Thu 21 Nov	64 Surya Namaskara	Bev
33	Tue 26 Nov	65 PS + SN	Leana	Thu 28 Nov	66 PS + SN	Christine
34	Tue 03 Dec	67 PS + SN	Ravi	Thu 05 Dec	68 PS + SN	Bev
35	Tue 10 Dec	69 PS + SN	Leana	Thu 12 Dec	70 PS + SN	Christine
36	Tue 17 Dec	71 PS + SN	Leana	Thu 19 Dec	72 PS + SN	Bev

8.3 Appendix C: Semi-structured interview schedule

Introduction

The aim of this conversation is to learn more about your reflections on and experiences of the intervention programme and the impact on your well-being.

(Reasons and goals)

1. Why did you decide to sign up for this programme?
2. What were you hoping to gain/achieve from your participation?

(Value)

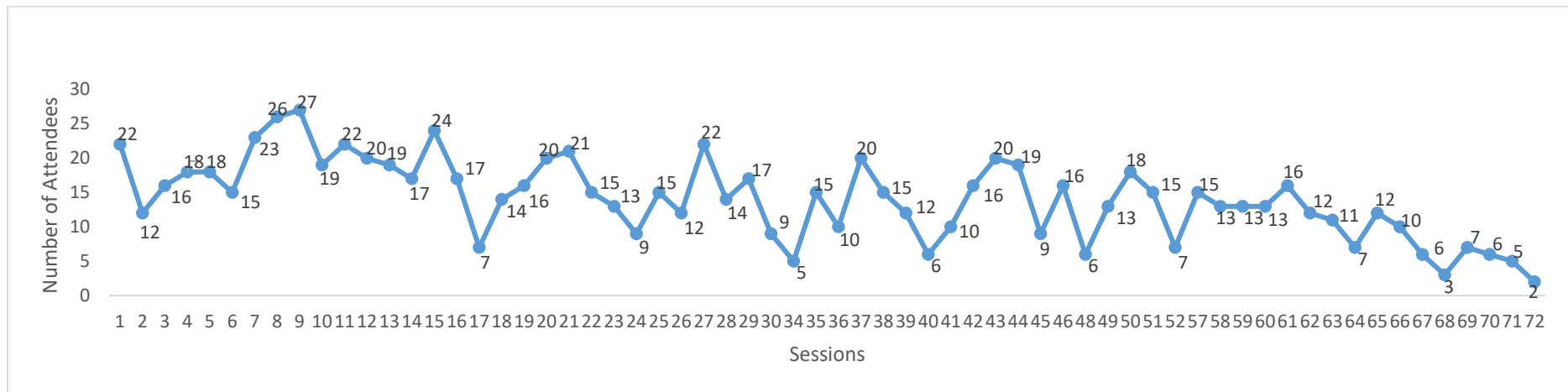
3. Reflect on your experiences of taking part in the programme and any possible impact it had on your sense of well-being
4. Reflect on your motivation throughout the programme and/or any challenges to stay committed
5. Did you learn any valuable lessons/skills from the theoretical component that helped you to improve your sense of well-being? How did it help you?
6. Did you learn any valuable lessons/skills from the practical component that helped you to improve your sense of well-being? How did it help you?
7. Describe any negative effects/feelings you might have experienced from taking part in the programme (if any)

(Recommendations)

8. Reflect on what you perceive as strengths and weakness of the programme and the ways it was implemented
9. Can you reflect on the feasibility of offering such programmes in workplace settings?
 - a. Please think of this question in terms of challenges in terms of your commitment and employee interest
10. Do you have any recommendation on how such programme could be enhanced?

8.4 Appendix D: Attendance Patterns for Individual Sessions over the Entire Intervention Period

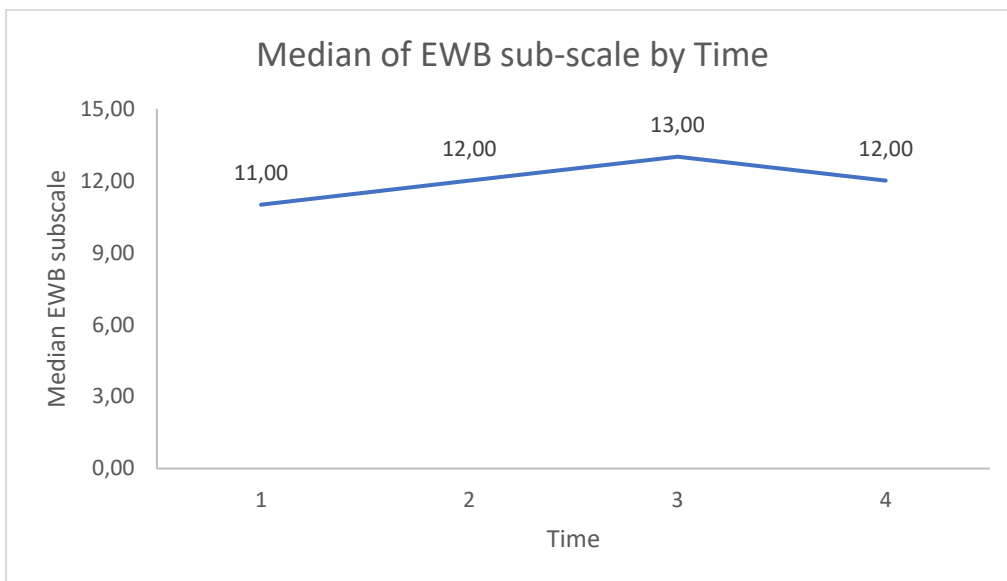
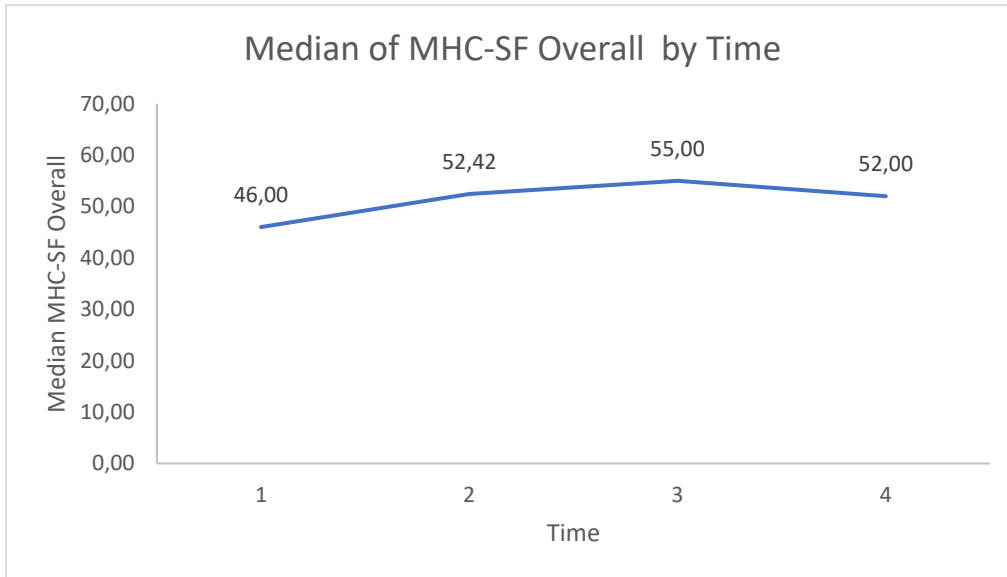
Attendance Patterns for Individual Sessions over the Entire Intervention Period

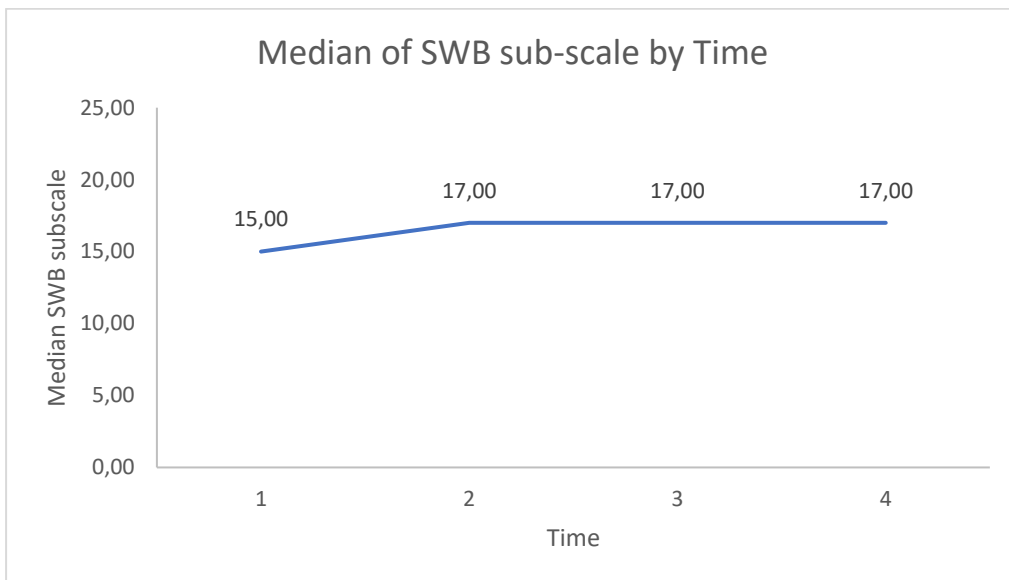
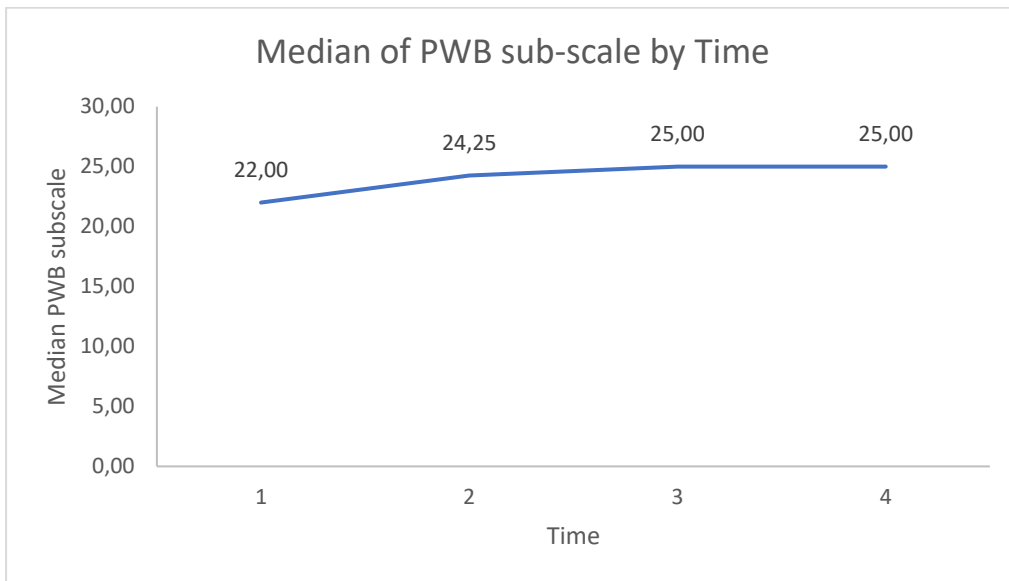


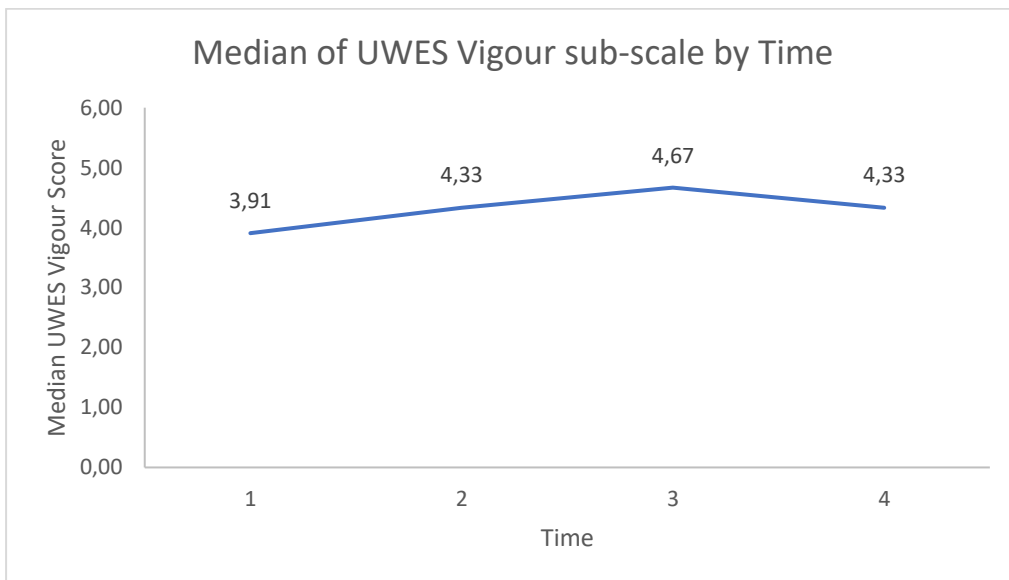
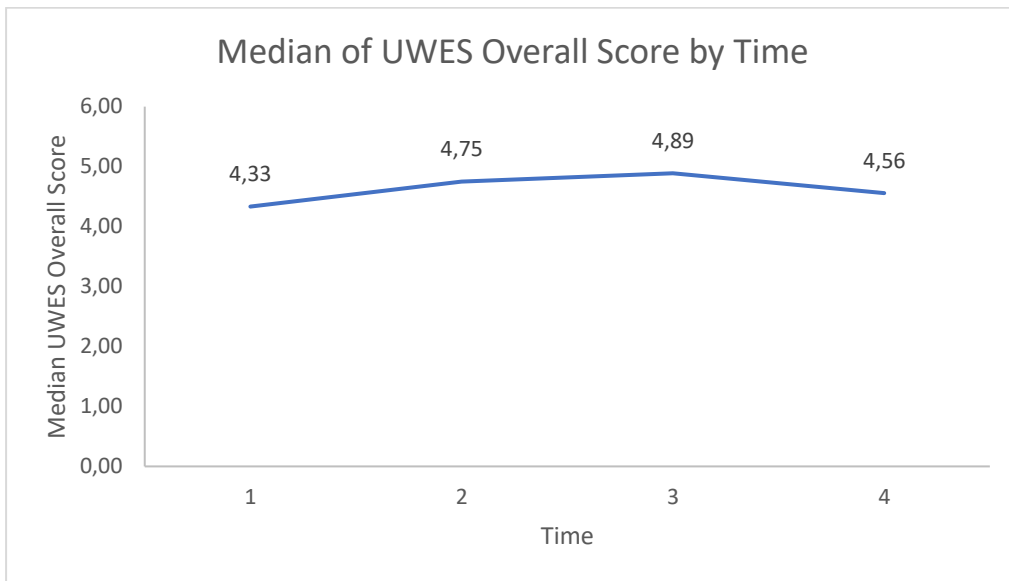
Note: Calculations based on the baseline sample (N = 46). Attendance rates for each of the 64 actualised sessions are presented. The first half of the programme (week 1-18; sessions 1-36) includes 33 actualised sessions, 3 being cancelled. The second half of the programme (week 19-36; sessions 37-72) had 31 sessions, 5 being cancelled.

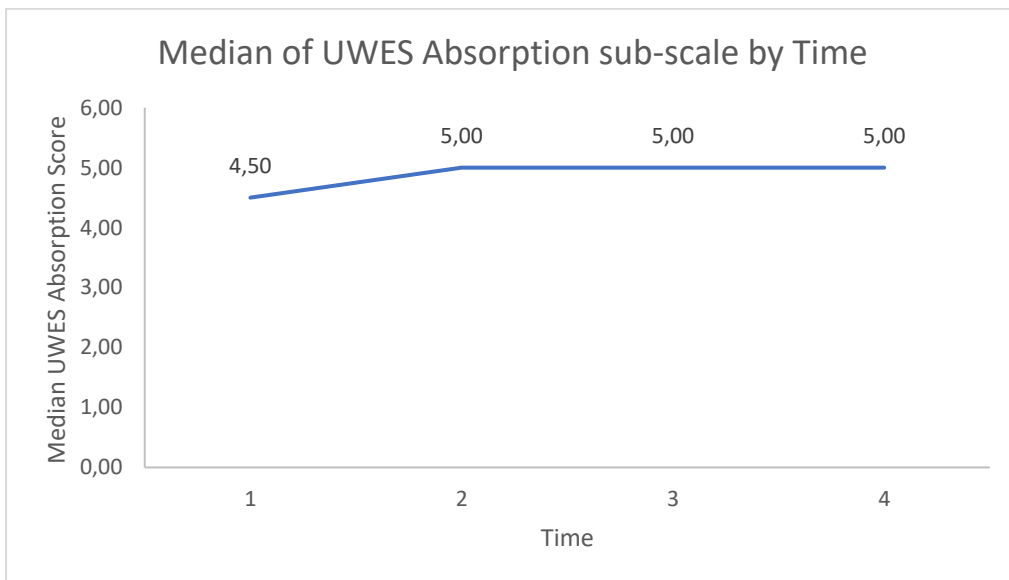
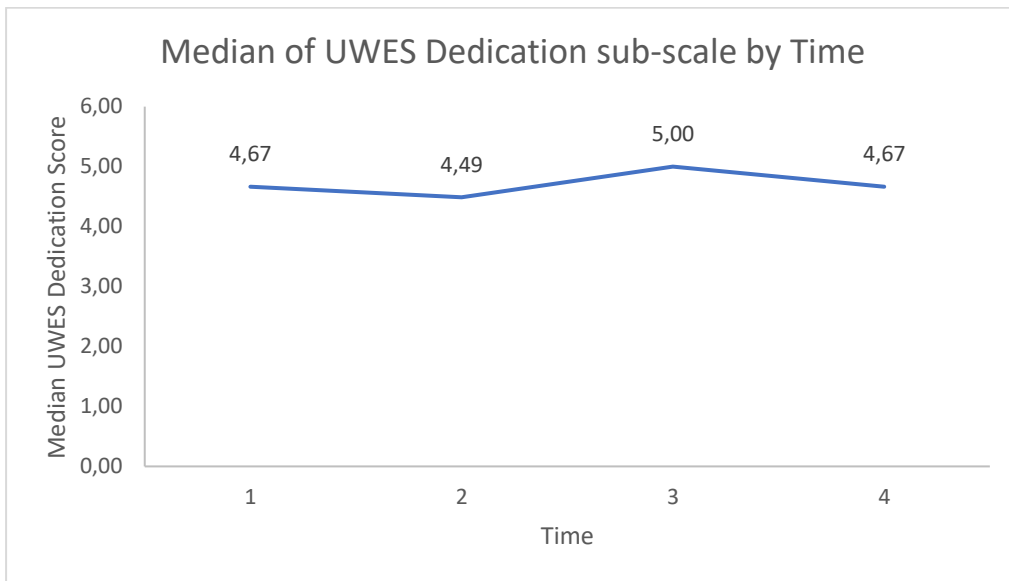
8.5 Appendix E: Median Trends of Outcome Variables Over Time (all scales and sub-scales)

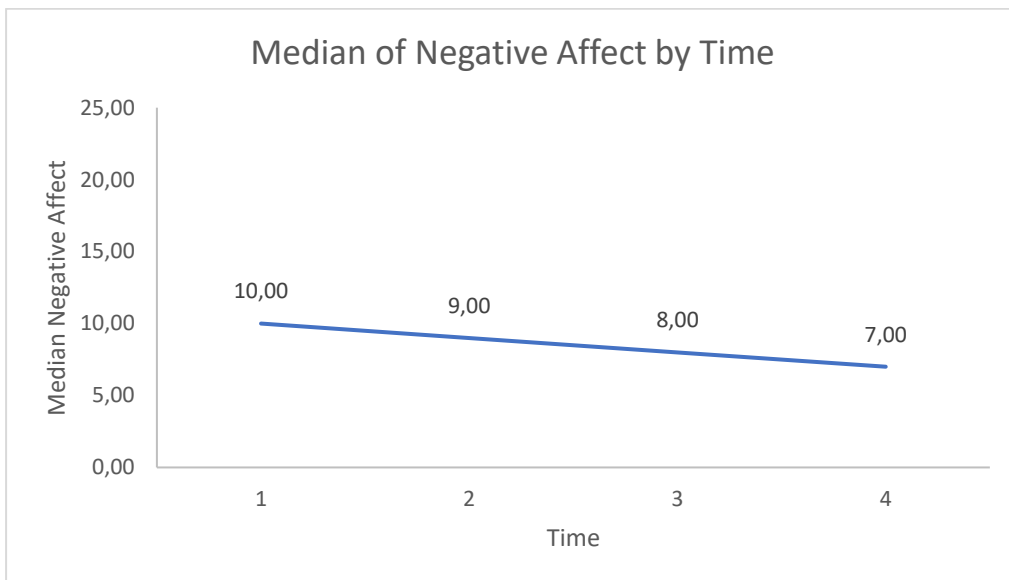
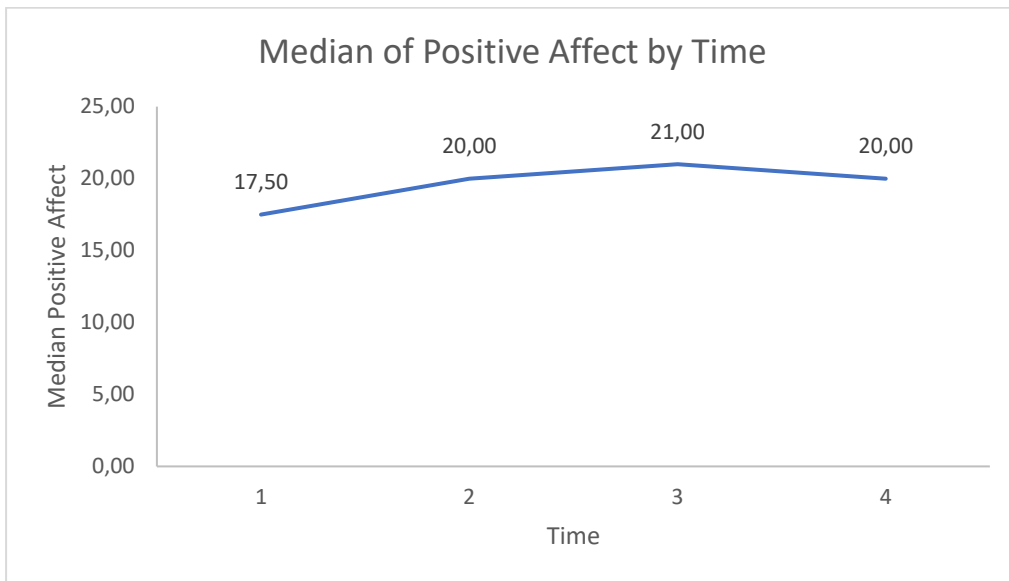
Median Trends of Outcome Variables Over Time

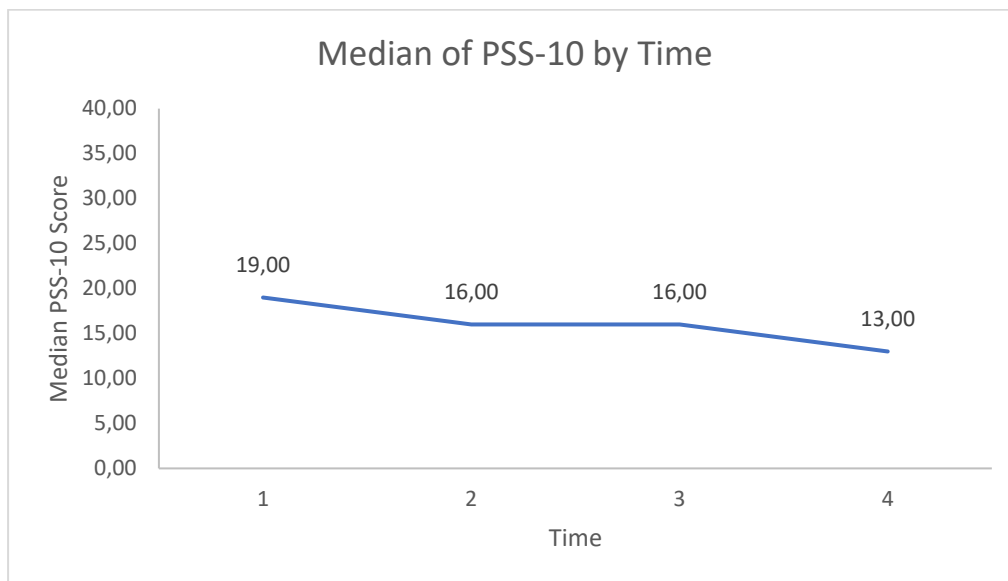












Note. Time 1, N = 44; Time 2, N = 29; Time 3, N = 19; Time 4, N = 13.

8.6 Appendix F: Normality Tests for All Outcome Variables (SPSS outputs)

Normality Tests for All Outcome Variables

Variable	Indicator	Time 1		Time 2		Time 3		Time 4	
		Statistic	Std. Error	Statistic	Std. Error	Statistic	Std. Error	Statistic	Std. Error
MHC-SF Overall	Mean	46,19	1,846	51,28	2,096	53,51	2,117	48,48	3,386
	95% Confidence Interval for Mean	Lower Bound	42,47	46,99	49,06	41,10			
		Upper Bound	49,91	55,57	57,95	55,86			
	5% Trimmed Mean	46,47		51,85		53,81		49,26	
	Median	46,00		52,42		55,00		52,00	
	Variance	149,953		127,413		85,118		149,046	
	Std. Deviation	12,246		11,288		9,226		12,208	
	Minimum	19		26		33		22	
	Maximum	69		66		69		61	
	Range	50		40		36		39	
	Interquartile Range	21		17		12		17	
	Skewness	-0,327	0,357	-0,567	0,434	-0,919	0,524	-1,202	0,616
	Kurtosis	-0,616	0,702	-0,406	0,845	0,671	1,014	0,431	1,191
MHC-SF EWB Sub-scale	Mean	10,50	0,452	11,90	0,456	12,80	0,397	11,31	0,804
	95% Confidence Interval for Mean	Lower Bound	9,58	10,96	11,96	9,56			
		Upper Bound	11,41	12,83	13,63	13,06			
	5% Trimmed Mean	10,68		12,11		12,89		11,45	
	Median	11,00		12,00		13,00		12,00	
	Variance	9,006		6,025		2,991		8,397	
	Std. Deviation	3,001		2,455		1,729		2,898	

	Minimum		3		4		9		5	
	Maximum		15		15		15		15	
	Range		12		11		6		10	
	Interquartile Range		5		2		2		3	
	Skewness		-0,778	0,357	-1,568	0,434	-0,815	0,524	-1,285	0,616
	Kurtosis		0,033	0,702	2,903	0,845	-0,221	1,014	1,241	1,191
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MHC-SF PWB	Mean		21,99	0,876	23,01	1,060	24,21	1,025	22,46	1,390
Sub-scale	95% Confidence Interval for Mean	Lower Bound	20,22		20,84		22,05		19,43	
		Upper Bound	23,75		25,18		26,36		25,49	
	5% Trimmed Mean		22,23		23,42		24,62		22,79	
	Median		22,00		24,25		25,00		25,00	
	Variance		33,760		32,591		19,961		25,103	
	Std. Deviation		5,810		5,709		4,468		5,010	
	Minimum		9		9		11		11	
	Maximum		30		30		30		28	
	Range		21		21		19		17	
	Interquartile Range		10		9		5		6	
	Skewness		-0,385	0,357	-1,009	0,434	-1,528	0,524	-1,432	0,616
	Kurtosis		-0,523	0,702	0,559	0,845	3,414	1,014	1,315	1,191
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MHC-SF SWB	Mean		13,71	0,829	16,38	0,943	16,50	0,948	14,71	1,556
Sub-scale	95% Confidence Interval for Mean	Lower Bound	12,03		14,44		14,51		11,32	
		Upper Bound	15,38		18,31		18,49		18,10	
	5% Trimmed Mean		13,79		16,49		16,50		14,79	
	Median		15,00		17,00		17,00		17,00	
	Variance		30,223		25,809		17,091		31,457	
	Std. Deviation		5,498		5,080		4,134		5,609	

	Minimum		2		6		9		5	
	Maximum		24		25		24		23	
	Range		22		19		15		18	
	Interquartile Range		6		7		6		10	
	Skewness		-0,521	0,357	-0,413	0,434	-0,159	0,524	-0,251	0,616
	Kurtosis		-0,365	0,702	-0,449	0,845	-0,797	1,014	-1,253	1,191
UWES Overall	Mean		4,04	0,224	4,56	0,183	4,79	0,147	4,72	0,293
	95% Confidence Interval for Mean	Lower Bound	3,58		4,19		4,48		4,08	
		Upper Bound	4,49		4,94		5,10		5,36	
	5% Trimmed Mean		4,11		4,58		4,78		4,77	
	Median		4,33		4,75		4,89		4,56	
	Variance		2,206		0,969		0,411		1,112	
	Std. Deviation		1,485		0,984		0,641		1,055	
	Minimum		1		3		4		3	
	Maximum		6		6		6		6	
	Range		5		3		2		3	
	Interquartile Range		2		2		1		2	
	Skewness		-0,629	0,357	-0,147	0,434	0,006	0,524	-0,514	0,616
	Kurtosis		-0,561	0,702	-1,230	0,845	-0,680	1,014	-0,103	1,191
UWES Vigour Sub-scale	Mean		3,81	0,210	4,32	0,212	4,56	0,198	4,44	0,378
	95% Confidence Interval for Mean	Lower Bound	3,39		3,89		4,15		3,61	
		Upper Bound	4,24		4,76		4,98		5,26	
	5% Trimmed Mean		3,85		4,32		4,55		4,48	
	Median		3,91		4,33		4,67		4,33	
	Variance		1,947		1,297		0,741		1,859	
	Std. Deviation		1,395		1,139		0,861		1,363	

	Minimum		0		3		3		2	
	Maximum		6		6		6		6	
	Range		6		3		3		4	
	Interquartile Range		2		2		2		2	
	Skewness		-0,390	0,357	-0,043	0,434	-0,128	0,524	-0,685	0,616
	Kurtosis		-0,510	0,702	-1,412	0,845	-1,306	1,014	-0,398	1,191
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UWES	Mean		4,15	0,270	4,60	0,199	4,95	0,201	4,77	0,323
Dedication Sub-scale	95% Confidence Interval for Mean	Lower Bound	3,60		4,19		4,53		4,06	
		Upper Bound	4,69		5,01		5,37		5,47	
	5% Trimmed Mean		4,26		4,63		5,00		4,82	
	Median		4,67		4,49		5,00		4,67	
	Variance		3,201		1,152		0,766		1,359	
	Std. Deviation		1,789		1,073		0,875		1,166	
	Minimum		0		3		3		3	
	Maximum		6		6		6		6	
	Range		6		3		3		3	
	Interquartile Range		3		2		1		2	
	Skewness		-0,702	0,357	-0,132	0,434	-0,566	0,524	-0,304	0,616
	Kurtosis		-0,593	0,702	-1,305	0,845	-0,338	1,014	-1,152	1,191
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UWES	Mean		4,14	0,233	4,76	0,180	4,85	0,158	4,95	0,277
Absorption Sub-scale	95% Confidence Interval for Mean	Lower Bound	3,67		4,39		4,52		4,35	
		Upper Bound	4,61		5,13		5,19		5,55	
	5% Trimmed Mean		4,24		4,80		4,86		5,00	
	Median		4,50		5,00		5,00		5,00	
	Variance		2,391		0,943		0,476		0,997	
	Std. Deviation		1,546		0,971		0,690		0,999	

	Minimum		0		3		4		3	
	Maximum		6		6		6		6	
	Range		6		3		2		3	
	Interquartile Range		2		1		1		2	
	Skewness		-0,643	0,357	-0,788	0,434	-0,338	0,524	-0,770	0,616
	Kurtosis		-0,382	0,702	-0,236	0,845	0,131	1,014	-0,190	1,191
Positive Affect	Mean		17,21	0,627	18,93	0,734	19,26	1,204	18,62	1,190
	95% Confidence Interval for Mean	Lower Bound	15,95		17,43		16,73		16,02	
		Upper Bound	18,47		20,44		21,79		21,21	
	5% Trimmed Mean		17,25		19,00		19,74		18,85	
	Median		17,50		20,00		21,00		20,00	
	Variance		17,282		15,638		27,538		18,423	
	Std. Deviation		4,157		3,954		5,248		4,292	
	Minimum		8		12		5		9	
	Maximum		25		25		25		24	
	Range		17		13		20		15	
	Interquartile Range		8		8		7		5	
	Skewness		-0,174	0,357	-0,347	0,434	-1,197	0,524	-1,107	0,616
	Kurtosis		-0,999	0,702	-1,169	0,845	1,465	1,014	0,919	1,191
	Negative Affect	Mean		11,18	0,557	9,52	0,627	8,42	0,747	9,38
95% Confidence Interval for Mean		Lower Bound	10,06		8,23		6,85		6,17	
		Upper Bound	12,31		10,80		9,99		12,60	
5% Trimmed Mean			11,12		9,37		8,19		8,98	
Median			10,00		9,00		8,00		7,00	
Variance			13,635		11,401		10,591		28,256	
Std. Deviation			3,693		3,377		3,254		5,316	

	Minimum		5	5	5	5				
	Maximum		19	17	16	21				
	Range		14	12	11	16				
	Interquartile Range		5	5	5	9				
	Skewness		0,288	0,357	0,665	0,434	0,832	0,524	1,210	0,616
	Kurtosis		-0,801	0,702	-0,281	0,845	-0,016	1,014	0,264	1,191
PSS-10	Mean		18,82	0,752	17,04	1,266	14,74	1,201	15,31	2,086
	95% Confidence Interval for Mean	Lower Bound	17,30		14,45		12,21		10,76	
		Upper Bound	20,34		19,63		17,26		19,85	
	5% Trimmed Mean		18,90		16,80		14,76		15,01	
	Median		19,00		16,00		16,00		13,00	
	Variance		24,913		46,484		27,427		56,564	
	Std. Deviation		4,991		6,818		5,237		7,521	
	Minimum		4		3		4		4	
	Maximum		30		37		25		32	
	Range		26		34		21		28	
	Interquartile Range		7		8		7		12	
	Skewness		-0,282	0,357	0,784	0,434	-0,256	0,524	0,745	0,616
	Kurtosis		0,894	0,702	1,609	0,845	0,009	1,014	0,614	1,191

8.7 Appendix G: Kolmogorov–Smirnov and Shapiro-Wilk Tests for All Variables (SPSS outputs)

Kolmogorov–Smirnov and Shapiro-Wilk Tests for All Variables

Variable	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
MHC-SF Overall_T1	0,092	44	.200*	0,968	44	0,265
MHC-SF Overall_T2	0,112	29	.200*	0,936	29	0,080
MHC-SF Overall_T3	0,172	19	0,141	0,913	19	0,085
MHC-SF Overall_T4	0,274	13	0,008	0,842	13	0,022
MHC-SF EWB_T1	0,158	44	0,008	0,929	44	0,009
MHC-SF EWB_T2	0,275	29	0,000	0,846	29	0,001
MHC-SF EWB_T3	0,220	19	0,016	0,896	19	0,041
MHC-SF EWB_T4	0,227	13	0,066	0,859	13	0,037
MHC-SF PWB_T1	0,101	44	.200*	0,945	44	0,036
MHC-SF PWB_T2	0,155	29	0,072	0,897	29	0,008
MHC-SF PWB_T3	0,178	19	0,114	0,868	19	0,014
MHC-SF PWB_T4	0,236	13	0,046	0,823	13	0,013
MHC-SF SWB_T1	0,154	44	0,010	0,943	44	0,031
MHC-SF SWB_T2	0,079	29	.200*	0,965	29	0,440
MHC-SF SWB_T3	0,115	19	.200*	0,968	19	0,742
MHC-SF SWB_T4	0,197	13	0,179	0,932	13	0,367
UWES Overall_T1	0,128	44	0,069	0,931	44	0,011
UWES Overall_T2	0,125	29	.200*	0,944	29	0,124
UWES Overall_T3	0,088	19	.200*	0,982	19	0,965
UWES Overall_T4	0,150	13	.200*	0,930	13	0,345
UWES VI_T1	0,100	44	.200*	0,966	44	0,225
UWES VI_T2	0,172	29	0,027	0,912	29	0,019
UWES VI_T3	0,168	19	0,161	0,918	19	0,104
UWES VI_T4	0,132	13	.200*	0,900	13	0,133
UWES DE_T1	0,159	44	0,007	0,883	44	0,000
UWES DE_T2	0,150	29	0,096	0,920	29	0,031
UWES DE_T3	0,142	19	.200*	0,933	19	0,194
UWES DE_T4	0,239	13	0,041	0,884	13	0,080
UWES AB_T1	0,187	44	0,000	0,918	44	0,004
UWES AB_T2	0,218	29	0,001	0,895	29	0,007
UWES AB_T3	0,235	19	0,007	0,910	19	0,073
UWES AB_T4	0,213	13	0,111	0,878	13	0,066
Positive Affect_T1	0,135	44	0,042	0,961	44	0,144
Positive Affect_T2	0,128	29	.200*	0,925	29	0,040
Positive Affect_T3	0,173	19	0,138	0,886	19	0,027
Positive Affect_T4	0,165	13	.200*	0,913	13	0,203
Negative Affect_T1	0,160	44	0,006	0,956	44	0,092
Negative Affect_T2	0,167	29	0,037	0,925	29	0,040
Negative Affect_T3	0,193	19	0,062	0,888	19	0,030
Negative Affect_T4	0,295	13	0,003	0,803	13	0,007
PSS-10_T1	0,076	44	.200*	0,984	44	0,782

PSS-10_T2	0,147	29	0,111	0,939	29	0,094
PSS-10_T3	0,122	19	.200*	0,983	19	0,972
PSS-10_T4	0,159	13	.200*	0,961	13	0,775

Note. Time 1, N = 44; Time 2, N = 29; Time 3, N = 19; Time 4, N = 13.

*. This is a lower bound of the true significance.

^a. Lilliefors Significance Correction.

8.8 Appendix H: Editor's Certificate



4 January 2022


TO WHOM IT MAY CONCERN

The thesis "Workplace Wellness: Yoga as a positive psychology intervention for employees in a South African higher education institution" by Leana Meiring has been proofread and edited for language by me.

I verify that it is ready for publication or public viewing regarding language and style and has been formatted per the prescribed style.

Please note that no view is expressed regarding the document's subject-specific technical content or changes after this letter's date.

Kind regards



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