Thriving of academics in higher education institutions: A strengths-based approach

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PREFACE AND DECLARATION

This thesis is presented in the form of research articles. Three articles were written and accepted for publication. The editorial styles specified by Springer Nature, the South African Journal of Industrial Psychology and the South African Journal of Psychology were used in the second, third and fourth chapters, respectively. The editorial and referencing style as ordained by the Publication Manual (6th edition) of the American Psychological Association (APA) were followed in the first and last chapters of this thesis. This customary practice is in line with the policy of the Optentia Research Focus Area of the North-West University (Vaal Triangle Campus) to use APA style in all scientific texts.

The researcher, Fathima Essop Mahomed, conducted the research and wrote the manuscripts. Prof. Ian Rothmann was the promoter of the study. I declare that "Thriving of academics in higher education institutions: A strengths-based approach" is my work and that all the sources that I have utilised or quoted are indicated and acknowledged using complete references.

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SUMMARY

Title: Thriving of academics in higher education institutions: A strengths-based approach

Keywords: Thriving, job crafting, human resource practices, higher education, strengths use, deficit correction, well-being, academics, performance, contextual performance, task performance, need satisfaction, academics, intention to leave.

Without higher education institutions (HEIs) of the highest quality, no developing country can achieve sustainable development because they are responsible for the generation, collection and transference of knowledge and skills. These are significant catalysts for the country's economic development through technology innovations and development of new ideas. However, HEIs worldwide have undergone significant transitions due to the monetisation of knowledge production and promulgation. South African HEIs had to deal with these global changes by finding a way to fit into the international space in addition to dealing with large-scale local challenges and structural transitions. A significant structural change was the introduction of the universities of technology (UoTs) as one of three institutional types. An institutional type has substantial effects on teaching and learning practices. One of the effects is that expectations placed on academics shifted, rendering accumulated work experience, which traditionally was the basis on which they were recruited and retained less important than their academic qualifications. Hence, the concern that working at a UoT would shift the role of the academic. Academics are required to improve their productivity in research, be more entrepreneurial and be much more professional in lecturing, all of which have positive implications for an academic identity. Nonetheless, professional development for academics is complex and is happening within a framework of evolving national policies, with growing demands on institutions, developers of academic content, and academics, which impact their well-being. Unfortunately, the conditions which enable and constrain the professional learning of academics in their multiple roles have not received considerable attention in South Africa.

This study's purpose was to learn about thriving of academics from a strengths-based approach using a cross-sectional survey design with a stratified random sample (n=276). Firstly, it was essential to determine the effects of job crafting and high-performance HR practices on the level of thriving of academics. Furthermore, to investigate strengths use and deficit correction influence on the extent to which academics perform and thrive. Moreover, it sought to

determine if academics make use of their strengths, and to what extent these strengths influence their psychological need satisfaction and intention to leave. The participants completed the following measuring instruments: the Job Crafting Questionnaire, the High-Performance Human Resource Practices Questionnaire, the Strengths Use and Deficit Correction Scale, the Strengths use Scale, the Basic Psychological Need Satisfaction and Frustration Scale, the Thriving at Work Scale and finally two performance scales, one to measure in-role coupled with the other measuring extra-role. Descriptive statistics, confirmatory factor analysis and regression analyses were done. In order to review the structural models of thriving at work and its relation to personal and organisational antecedents and outcomes, structural equation modelling was used.

Study 1 confirmed a two-factor structure of thriving (vitality and learning), a three-factor structure of job crafting, and a seven-factor structure of high-performance HR practices. The findings supported a model in which job crafting and high-performance HR practices interacted to affect the thriving of academics in higher education institutions. Job crafting was a stronger predictor of thriving than high-performance HR practices. The more academics practised cognitive, task and relational job crafting, the more they experienced vitality and learning in their jobs. Communication, promotion, and selection had the strongest associations with thriving. However, the findings suggested that high-performance HR practices play a significant and more important role when academics are not crafting their jobs. More specifically, when academics cannot or do not want to recraft their jobs, high-performance HR practices are critical for maintaining a high level of thriving.

Study 2 revealed that 11 per cent of employees did not thrive at all. A lack of energy was evident in 22 per cent of the sample while 43 per cent did not function optimally concerning learning. The results revealed that perceived organisational support for strengths use, as well as individual strengths use and deficit correction, predicted thriving at work. Thriving predicted task and contextual performance. The structural model confirmed that perceived organisational support for strengths use had an impact on the thriving of employees. Therefore, when these institutions supported the use of talents and strengths during the performance of tasks and academic duties, employees felt the most vitality. Deficit correction behaviour and strengths used by individual academics also contributed to thriving at work. When academics could develop their weaknesses and improve on their tasks and academic duties, they felt more energised and experienced learning. Together, these three variables (i.e. perceived

organisational support for strengths use, individual strengths use, and deficit correction) explained most of the variance in thriving at work.

Study 3 offered support for a model where strengths use predicted psychological need satisfaction (autonomy, relatedness and competence). The outcomes furthermore showed that autonomy satisfaction was the best predictor of thriving at work. Autonomy satisfaction suggests that workers perceive they can influence and regulate their actions. Participants who were academics thus preferred work place autonomy to allow them to thrive, leading to decreased intention to leave.

Recommendations for future research were made.

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CHAPTER 1

INTRODUCTION

This thesis focuses on the thriving of academics in higher education institutions. More specifically, it investigates employees' perceptions of organisational and personal factors that may affect their experiences of thriving at work.

The purpose of this chapter is to offer a brief introduction and background to contextualise the study and to state the problem from which the general and specific research objectives flow. It also outlines the research design, data collection methods and data analysis strategies that were employed to investigate the problem, and concludes with an outline of the chapters.

1.1 Introduction and Background

Without adequate higher education institutions (HEIs), no developing country can achieve sustainable development (Altbach, 2013). These institutions are knowledge-based and serve as a significant catalyst towards sustainable development since they are involved with the generation, acquisition and transfer of knowledge and skills to the populace that are necessary for the country's economic development through technology innovations and development of new ideas (Katharaki & Katharakis, 2010). However, HEIs worldwide have undergone significant transitions due to the commercialisation and marketisation of knowledge production and dissemination, the massification of knowledge, an emphasis on academic entrepreneurialism and a preoccupation with research "outputs" (Currie, DeAngelis, De Beer, Huisman, & Lacotte, 2003; Ssesanga & Garrett, 2005; Weber & Vandeyar, 2004). South African HEIs not only had to deal with these global changes by trying to find their niche in the global marketplace, but must also deal with the large-scale local challenges and structural transitions (Rabe & Rugunanan, 2012). Some of the challenges are to detect options for dealing with, among others, the escalating costs of institutional operation and safeguarding sustainability in the face of dwindling government subsidies, increasing interinstitutional competition for the best students, and the changing needs of the various higher education stakeholders, as well as issues of quality if they are to meet the expectations of stakeholders (Abeli, 2010).

A significant structural change was the introduction of the universities of technology (UoTs) as one of three institutional types. An institutional type has substantial effects on teaching and learning practices (Cooper, 2015). One of the effects is that expectations placed on academics shifted and so their industry expertise, which had long been the basis on which they were hired and retained, became less important than their academic qualifications. Hence the concern is that working at a UoT would shift the role of the academic (McKenna & Powell, 2009). Generally, academics interact with each other and students to perform essential tasks that help in attaining long-term objectives. The role of an academic is broadly understood to encompass teaching, programme design, evaluation, and the scholarship of teaching and learning. Apart from this, they have to be proactive, co-operate professionally with others and take responsibility for their professional development.

Academics are required to be more professional in lecturing, much more productive in research and extra entrepreneurial (Cummings & Arimoto, 2013), all of which have positive implications for an academic identity (Kraak, 2006). Nonetheless, professional development for academics is complex and is happening within an environment of changing national policy directives, with increasing demands on institutions, academic developers, and academics themselves (Brew, 2007; Deem, Hillyard, & Reed, 2008), which impact their well-being (Poalses & Bezuidenhout, 2018; Rothmann & Barkhuizen, 2008; Vazi, Ruiter, Van den Borne, Martin, Dumont, & Reddy, 2011). Ryan and Deci (2000) highlight that although all people can grow and develop, an accomplishment in this area depends on the context in which they act (Spreitzer, Sutcliffe, Dutton, Grant, & Sonenshein, 2005). Contextual features of the work unit and resources that are generated in work processes, e.g. meaning and knowledge, promote the experience of learning, which is a core component of thriving at work (Prem, Ohly, Kubicek, & Korunka, 2017).

HEIs should treasure, nurture and value their human capital during these times of change (De Lange & Olivier, 2008), as academics and the infrastructure that supports them are the most substantial investments that HEIs can make. Improving academics' performance, therefore, can have a disparate impact on the functioning of HEIs, if support is provided for the development of academics to optimise performance towards competitive advantage. This will ensure HEIs survival within the challenging and competitive higher education environment. High performing and productive staff members are valuable assets for organisations and aid in obtaining organisational goals (Awang et al., 2015). Unfortunately, the conditions which

enable and constrain the professional learning of academics in their multiple roles have not received considerable attention in South Africa (Council for Higher Education [CHE], 2016).

It was highlighted by (Garnett & Mahomed, 2012) that some contraints experienced by academics include heavy teaching loads and the pressure to fulfil multiple roles in UoTs. Also, greater student numbers, changes in the composition of students with poor learner discipline, new technology, transforming curricula to become more locally relevant and quality assured but also geared to a knowledge-driven world so that they produce scholars that can tackle South Africa's problems through research for all of society's needs (CHE, 2016). Furthermore, academics have lost some of their traditional autonomy over work time and output (Gappa, 2010) and have to contend with poor remuneration, a lack of proper promotion policy, role overload, role conflict and a lack of resources (Viljoen & Rothmann, 2009). Also, discrimination on the basis of race and gender and insufficient support for teaching and research leave most academics unhappy, disengaged and lacking in commitment (Tyan & Garbett, 2007). There is evidence of a negative association with the prolonged high workload and other stressors and mental health, physical health, work motivation and performance (Dağdeviren, Musaoğlu, Ömürlü, & Öztora, 2011), which does not contribute to optimal functioning.

The effectiveness of HEIs is based on, among other criteria, their research outputs (demonstrated by publications in refereed journals), their postgraduate outputs (mainly doctoral), and the quality of academic staff (Samuel & Chipunza, 2013). However, the capacity, functioning and sustainability of HEIs are threatened by the number of academics leaving higher education, internationally as well as in South Africa (Robyn & Du Preez, 2013; Selesho & Naile, 2014). Recruitment and retention are affected by the very nature of the job, as well as an ageing workforce, compounded by the changes and challenges mentioned above. Academics believe that the whole employment package relative to other employment sectors is not substantial. This includes pay and fringe benefits, fundamental aspects of the job (academics, teaching and research), job security, work organisation, autonomy, progression, family-friendly practices, congeniality of colleagues and the working environment. It was noted that in South Africa, senior academic staff tend to attach greater importance to challenging work, interpersonal relationships, access to research resources and job security. Salary was rated most important by young academics (Samuel & Chipunza, 2013). This makes it difficult for institutions to attract and retain junior academic staff. Hence, staff will likely

seek out better environments where their potential will be recognised, appropriately rewarded and fully utilised. Should this happen, HEIs would inherit a mediocre group of academics, which will inevitably erode their ability to serve as centres of academic excellence and as an essential factor for socio-economic development (Powell, 2010; Universities South Africa, 2014). This scenario is becoming all the more noticeable in South Africa where universities and research institutions are competing to recruit top academics and researchers. Therefore, the need for HEIs to develop mechanisms and provide structures to attract, retain and develop academics' professional competence with a long-term goal of personal development within the career is vital, as the sustainability of higher education institutions is determined by the extent to which academic staff are recruited, developed, managed and retained (Pienaar & Bester, 2008).

An essential step in developing a high-quality education system is understanding the factors that influence the excellence and well-being of academics. There is an increasing appreciation for the fact that good mental and physical health consists of the presence of well-being in addition to the absence of pathology and illness (Keyes, 2006). The positive psychology movement has seen significant inquiry into the exploration of optimal functioning (Rusk & Walters, 2013) since the absence of pathology alone is not sufficient to drive personal growth and achieve optimal well-being (Lyubomirsky, 2012; Seligman, 2011). One approach toward understanding personal growth and human sustainability at work is by focusing on thriving. Thriving is defined as "the psychological state in which individuals experience both a sense of vitality and a sense of learning at work" (Spreitzer et al., 2005, p. 538). This study will, therefore, focus on the application of positive psychology to achieve thriving of academics in South African UoTs.

1.2 Problem Statement

Academics at HEIs have to navigate and operate in a very fast-paced and complex, competitive work landscape. It has become critical for them to develop on the job. Conditions which enable the professional learning of academics in their role have not received much attention in South Africa. However, it is imperative that academics not only be learning but thriving. Learning is only one of the dimensions of thriving. It is important that both vitality and learning be present in order to reap all the benefits that thriving employees bring to the organisation. When employees are learning (cognitive dimension of thriving) and growing at work, they are in a

position to identify problems and to come up with new ideas (Carmeli & Spreitzer, 2009). Learning is vital for enhancing expertise, which provides the basis for looking at and doing things in new and constructive ways (Spreitzer et al., 2005).

Furthermore, learning at the workplace enhances the competencies and capabilities which can lead to increased performance. A sense of learning may also contribute to positive physical health (Spreitzer et al., 2005) and individuals who are continuously learning at their workplace report that their work contributes positively to their mental and physical health (Ettner & Grzywacz, 2001). Vitality (affective dimension of thriving) advances worker involvement in creative work behaviours, because when employees sense vitality at their workplace, they have energy and motivation to partake in innovative work tasks (Kark & Carmeli, 2009).

The notion of *thriving* has received interest in the positive psychology scholarship movement (Abid, Zahra, & Ahmed, 2016; Carmeli & Spreitzer, 2009; Cullen, Gerbasi, & Chrobot-Mason, 2015; Prem et al., 2017; Taneva, Arnold, & Nicolson, 2016; Van der Walt, 2018; Walumbwa, Muchiri, Misati, Wu, & Meliani, 2018; Zhang, 2018) in a variety of countries and settings, but to the best of the researcher's knowledge, no research has yet been conducted in the South African higher education context. Thriving is known to play a critical role in the generation of innovative and creative ideas (Carmeli & Spreitzer, 2009). Furthermore, thriving at work has shown to be positively associated with critical organisational outcomes such as employee health, high job performance, reduced absenteeism, innovative work behaviour, organisational citizenship behaviour, organisational commitment, development, and overall job satisfaction, as well as lower levels of burnout, job strains, turnover intentions and actual turnovers (Carmeli & Spreitzer, 2009; Cullen et al., 2015; Niessen, Sonnentag, & Sach, 2012; Paterson, Luthans, & Jeung, 2013; Porath, Spreitzer, Gibson, & Granett, 2012; Wallace, Butts, Johnson, Stevens, & Smith, 2016).

Across industries, employees who perceive themselves as thriving report to be healthier, with fewer physical complaints, and also feel less burned out (Porath et al,2012). The better health and the reduced likelihood of burnout may be what enable employees to sustain their thriving over time. In this way, thriving can enable effective self-regulation for better well-being over time (Pfeffer, 2010; Spreitzer & Porath, 2012). Growth and development matter most to employees, followed closely by fair access to opportunities and pay equity (Human Resource Director, 2018). Notably, employees who are energised and bring their authentic selves to work

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are 45% more invested in their role (Human Resource Director, 2018). By paying attention to one's sense of vitality and learning, individuals have a mechanism to assess the sustainability of their work (Spreitzer, Porath, & Gibson, 2012). Paterson et al. (2013) further suggest that when employees' vitality or opportunities for learning are low, adjustments should be made to job assignments, workloads and training to enable higher levels of thriving at work. Also, making sense of the ever-changing environment, employees are likely to drain scarce resources that would otherwise contribute to learning and vitality, in much the same way that additional processing demands distract employees from the task at hand, reducing task-focused cognitive resources (Montgomery, Kane, & Vance, 2004). These ever-changing and turbulent conditions are evident in the higher education sector in South Africa.

Although scholars have highlighted the importance and benefits of thriving for organisations (Abid, Zahra, & Ahmed, 2016; Spreitzer et al., 2012; Spreitzer & Porath, 2012; Taneva, Arnold, & Nicolson, 2016;), "research on thriving at work is still quite sparse" (Niessen et al., 2012, p. 468) therefore more needs to be done. For example, even though "how much thriving potential is realised depends on the organisational context" (Spreitzer et al., 2012, p. 158), the roles of the work context and individual factors (Fritz, Lam, & Spreitzer, 2011) in enabling employees to thrive either independently or jointly still have to be theoretically fleshed out and empirically examined.This should allow for a better understanding of how these relationships should enhance well-being and overall performance of organisations. The contextual and personal factors such as job crafting, strengths, psychological needs satisfaction, and high-performance HR practices relevant to this study follow.

Job crafting

The term *job crafting* has emerged from job design theory and is defined as "actions that employees take to shape, mould and redefine their jobs" (Wrzesniewski & Dutton, 2001, p. 180). It is seen as a form of proactive behaviour which is informal and driven by employees rather than by management. It focuses on positive changes that employees can make to the task, relational or cognitive features of their jobs, usually without the knowledge of supervisors. Task crafting refers to initiating changes to the number or type of activities one completes on the job. Relational crafting involves exercising discretion, about whom one interacts with at work, and cognitive crafting is distinct from task and relational crafting in that it involves altering how one "sees" one's job, with the view of making it more personally meaningful.

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An underlying premise of job crafting is that employees use it to shape their work practice to align with their individual needs, interests and values, and ultimately enhance the enjoyment, meaning and job satisfaction they attain from their work (Berg, Dutton, & Wrzesniewski, 2013).

Job crafting provides opportunities to establish relationships and to enhance individual purpose, meaning and value that employees attain from their daily activities on the job (Heaphy & Dutton, 2008). This has the purpose of making a positive contribution at work and in the broader environment (Grant, 2007), thereby increasing a person's well-being (Booth, 2013). Hence, job crafting behaviours may lead to positive outcomes such as work engagement, job satisfaction and flourishing (Demerouti, Bakker, & Gevers, 2015; Nielsen & Abildgaard, 2012; Sen & Khandelwal, 2017; Slemp & Vella-Brodrick, 2014). While these studies provided significant knowledge regarding outcomes of job crafting, no research has been conducted on the effects of job crafting on levels of thriving at work. Wrzesniewski and Dutton (2001) and, more recently, Guan and Frenkel (2018) found that organisations can stimulate job crafting through HR practices. Such HR practices can be considered a 'signal' from the organisation to employees that they are allowed to job craft (Den Hartog, Boselie, & Paauwe, 2004).

Work design should, therefore, provide chances for autonomous actions and social roles in which employees can demonstrate their comprehension of work to benefit them and the entire organisation. In doing so, motivation to work can be attained intrinsically rather than extrinsically (Slemp & Vella-Brodrick, 2013) and, therefore, job crafting can be seen as a process through which employees can turn their ordinary jobs into an occupational calling.

Until a few years ago, most of the research on job crafting was qualitative (Fried, Grant, Levi, Hadani, & Slowik, 2007; Lyon, 2008; Wrzesniewski & Dutton, 2001). Lyon (2008) used an interview study to investigate how often job crafting occurred and found that 78 per cent of the sample reported at least one job crafting attempt and that a considerable number of these job crafting behaviours were directed toward tasks and relationships at work. Recently a general scale for job crafting, known as the *Job Crafting Questionnaire* (JCQ) (Slemp & Vella-Brodrick, 2013) was developed which can be used in psychological research to assess the extent to which individuals engage in job crafting activities. The JCQ is slightly different from other measures of job crafting in that items are worded in a way that is relevant and meaningful for the general adult working population, allowing the measure to be used in research involving an

array of occupations and organisational contexts where opportunity exists for employing job crafting activities. The JCQ shows that cognitive crafting items loads on a separate construct to the other behavioural features of the task and relational crafting, suggesting that cognitive crafting processes form a significant part of what constitutes job crafting. The JCQ aligns with the original three-component model of job crafting put forward by Wrzesniewski and Dutton (2001). Job crafting is seen as a very favourable concept in organisational psychology, although it has not received much research attention in South Africa, especially in higher education.

Strengths

The strengths-based approach (SBA) developed from the positive psychology paradigm, accentuating what is right with people in contrast to what is wrong. In the past, studies had centred on the notion of improving or overcoming weaknesses or deficiencies (Buckingham, 2005; Buckingham & Clifton, 2001; Goaverts, Kyndt, Dochy, & Baert, 2011). Practically, this has transformed into employee shortcomings being identified and consequently addressed through development initiatives. This approach is known as the deficit-based approach (DBA). According to Noe (2010), the DBA has been well entrenched in various organisations for several decades, and much of human resource practices are focused on identifying and resolving employee deficits by providing training, feedback, and coaching. Although this may help employees to improve their performance, positive psychology scholars emphasise a more balanced approach: focusing not only on trying to correct weaknesses but also on building people's strengths (Luthans & Youssef, 2007). It, therefore, seems necessary to investigate the effect of *both* these approaches on critical organisational outcomes. More specifically, Van Woerkom, Mostert, Els, Rothmann, and Bakker (2016) argue that it is crucial for an organisation to be supportive of employees to use their strengths and improve or overcome their weaknesses. These authors maintain that positive organisational outcomes are a result of employees who perceive their organisations to be supportive of them.

When organisations actively support employees to understand that they bring unique talents and strengths to their work and that the organisation and its employees are better off when they can make the most of an employee's unique strengths, employees will be more likely to apply their strengths to their work. The comprehensive understanding of HEIs' staff strengths can have a significant impact on their level of thriving. From a strengths perspective, it is suggested that everyone has unique abilities that can help them to thrive and perform at their best (Wood,

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Linely, Maltby, Kashdan, & Hurling, 2011). Individuals who utilise their strengths may yield feelings of confidence, self-efficacy and self-esteem (Linley & Harrington, 2006), as well as increased vitality and subjective and psychological well-being (Govindji & Linley, 2007; Linley, Nielson, Gillet, & Biswas-Diener, 2010). Such a state of mind will lead to increased levels of work engagement and will reduce levels of stress (Proctor, Maltby, & Linley, 2011). Previous research on higher education already showed that many academics experience high levels of stress and decreased levels of engagement (Barkhuizen, Rothmann, & Van de Vijver, 2014).

Stefanyszyn (2007) showed that people working from their strengths perform better and stay with the company longer. When focusing on self-development, people tend to improve faster in areas where they are already strong (Smedley, 2007). In a similar vein, employees who aim to improve their weaknesses using training not only gain a positive state of mind characterised by feelings of fulfilment and satisfaction but are also provided with growth opportunities in their career. It is clear that focusing on strengths benefits the employees and their organisations (Elston & Boniwell, 2011). Benefits for the employees include positive emotions, which enable them to achieve the goals they set, ultimately providing the organisation with loyal, productive and satisfied employees (Henry & Henry, 2007), an increased sense of authenticity and enthusiasm for taking action (Elston & Boniwell, 2011). It also relates to increased well-being (Proctor et al., 2010).

In HEIs, academic staff typically have little or no formal preparation for their role as lecturers (CHE, 2016). However, academics are knowledge workers who should generate new knowledge and innovation, not only in technology but also in human behaviours and actions. The latter is about the career development of students and staff. It is acknowledged that staff expertise is the most valuable asset of any HEI (Blackmore & Blackwell, 2003). Therefore it is necessary to determine if academic staff are given the opportunity to use their strengths for their job and to determine if the use of these strengths will lead to better performance, resulting in them less likely to leave.

HEIs need to become strengths-based organisations and employees need to perceive that their organisations support them to use their strengths in their jobs. According to Eisenberger, Huntington, Hutchison, and Sowa (1986), perceived organisational support occurs when employees form global beliefs about the extent to which their organisations are committed to

them and value their contributions and well-being. Employees with high levels of perceived organisational support judge their work more favourably (increased job satisfaction, more positive mood, reduced stress) and are more invested in their organisation (increased affective organisational commitment, increased performance, reduced turnover) (Rhoades & Eisenberger, 2002).

Psychological need satisfaction

There are certain universal psychological needs that, when satisfied, lead to optimal functioning of the natural propensities for growth and integration as well as constructive social development, personal well-being, psychological adjustment, eudaimonia and integrity. This is known as the self-determination theory (SDT) (Deci & Ryan, 1985, 2000; Ryan & Deci, 2000). The self-determination theory proposes that intrinsic goals (e.g. those related to personal growth, emotional intimacy and community involvement) are inherently rewarding, presumably because they directly satisfy innate, basic psychological needs. These needs are the desire for (1) autonomy, which requires the experience of choice and being the initiator of one's behaviour, (2) competence, which requires succeeding at challenging tasks and ultimately attaining desired outcomes, and (3) relatedness, which requires a sense of caring, mutual respect and mutual reliance. The extent to which the three needs are satisfied in the workplace determines the level of well-being that employees experience.

Carver (1998) pictured thriving as the psychological experience of growth in a positive capacity (i.e. a constructive or forward direction) that energises. The learning dimension of thriving is consistent with a personal growth component and articulates how the other components are nutriments of growth. For example, positive relations with others are similar to a sense of relatedness. Environmental mastery, the capacity to manage one's life and the surrounding world, is similar to a sense of competence. The construct of intrinsic motivation describes this natural inclination toward assimilation, mastery, spontaneous interest, and exploration that is so essential to the cognitive and social development and that represents a principal source of enjoyment and vitality throughout life (Csikszentmihalyi & Rathunde, 1993; Ryan, 1995).

Self-determination theory indicates that when people feel autonomous, they are more likely to feel vital (Deci & Ryan, 2000). Decision-making discretion is also likely to enhance the learning dimension of thriving through the SDT dimensions of competence and relatedness.

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When individuals can exercise choice about what to do and how to do it, they are more likely to feel competent to seek out new directions for doing their work. A key insight from the SDT stream is that when one's context enables autonomy, competence, and relatedness, one is more likely to experience vitality (the SDT literature does not make an explicit link to the learning dimension of thriving; nevertheless, some of the logic does link nicely to notions of growth and development, which implies at least some learning). Furthermore, SDT is at the centre of how context affects thriving because it describes how individuals pursue conditions that foster their growth and development (Deci & Ryan, 2000). People do not thrive at work just because they are pressured to do so by a boss, or forced to do so by the organisational system. Instead, autonomously motivated employees who act with desire, find their job interesting and suited to expressing themselves, and who thus engage in their job volitionally are more likely to be oriented toward growth and to experience vitality (Gagne & Deci, 2005; Ryan & Deci, 2000).

High-performance human resource practices

High-performance HR practices (HPHRP) are generally viewed as a set of interrelated human resource practices designed to enhance the quality and performance of employees in organisations (Messersmith, Patel, Lepak, & Gould-Williams, 2011). High-performance (HR) practices are designed to create added value within an organisation, which communicates vital goals and desired employee behaviours from the organisation to the employee (Rousseau, 1995). They can be seen as 'signals' and are interpreted as such by employees (Boselie & Paauwe, 2004). The practices included in the current study were divided into a) ability-enhancing HR practices (selection, and training and development), b) motivation-enhancing HR practices (job security, promotion and performance-related pay) and c) opportunity-enhancing HR practices (autonomy and communication). Business organisatons rely on HR practices to influence employee behaviours and ultimately to gain more beneficial outcomes (Chang & Chen, 2011). This study suggests that it is equally important for higher education institutions to rely on their HR practices to yield similar beneficial outcomes from academics (e.g. higher pass rates, more research published, intention to stay). Therefore, research on the impact of HR practices on employee well-being is crucial.

In order to examine the influence of HR practices on employee behaviour, researchers have argued that it is essential to focus on how employees perceive those practices, rather than relying on accounts of the intentions behind HR practices at a strategic level as reported by HR

professionals (Khilji & Wang, 2006; Nishii, Lepak, & Schneider, 2008). These HR signals are not always perceived and interpreted by employees in the same way – due to individual differences in experience, individual expectations, values and preferences (Den Hartog et al., 2004). Furthermore, Wright and Nishii (2007) propose that the effects of HR practices on employee attitudes and behaviours occur via employee perceptions of HR practices, which will affect employee outcomes such as job satisfaction, work motivation, commitment, performance, intention to quit and organisational citizenship behaviour (OCB). Positive perceptions of HRM practices lead employees to higher task-related performance (Kuvaas & Dysvik, 2010), to exhibit more organisational citizenship behaviour (Kuvaas & Dysvik, 2010; Nishii et al., 2008) and to be less likely to quit (Allen, Shore, & Griffith, 2003; Boon, Den Hartog, Boselie, & Paauwe, 2011; Boselie, 2010; Gould-Williams & Gatenby, 2010; Kuvaas, 2008; Kuvaas & Dysvik, 2010). Therefore, employee perceptions of HR practices are essential for explaining their attitudes and behaviours (Purcell & Hutchinson, 2007). Guest (2002) alluded to the notion that the impact of HR on performance depends upon the response of workers on HR practices. Verbeeten (2008) has proposed that quality and quantity performance is positively associated with clear and measurable goals; incentives are also positively related to performance. Medlin and Green (2009) have stated that goal setting, employee engagement and a high level of workplace optimism jointly improve the performance of an individual in an organisation.

Although perceptions of HR practices are proposed to have a strong association with employee outcomes, relatively few studies have focused on individual experiences of HR interventions. It is crucial to understand how employees' perceptions of HR practices are linked with employee outcomes, especially in the South African higher education environment.

Outcomes of thriving and non-thriving

Entry into a successful academic career is a laborious process, and it is vital that the management of these institutions understand the factors motivating their employees to stay in the field as well as the factors causing them to leave. Also, are these factors associated with worker characteristics, such as behaviour or cognition, which are critical to individual and contextual outcomes related to well-being, or with the nature of the work process?
Management has some control over the latter (Horvat, 2004). Naturally, identifying and understanding the factors would be a first step for taking action to reduce turnover rates.

As previously mentioned, many academics are thinking of leaving the HE environment (Higher Education South Africa [HESA], 2011; Robyn, 2012); retention of employees in higher education institutions (HEIs) is a serious concern as high employee turnover has grave implications for the quality, consistency, and stability of academic enterprises. Turnover can have unfavourable effects on both students and the remaining academic staff members if positions are vacated and then filled by inexperienced personnel (Powell, 2010). In South Africa, some research (Naidoo, 2008; Samuel & Chipunza, 2009) has been conducted in the field of employee retention, specifically in the institutions of higher learning. However, more research is necessary.

Employee attitudes towards the job and organisation are also considered important consequences of HR practices and predictors of turnover intention (Edgar & Geare, 2005). According to Marescaux, De Winne, and Sels (2013), employees who perceive that they are exposed to developmental and empowering HR practices are more likely to experience a general feeling of autonomy and relatedness satisfaction, which is associated with higher work engagement, higher affective organisational commitment and lower intention to leave the organisation.

Alfes, Shantz, Truss, and Soane (2013) have shown that where employees' perceptions of HR practices are positive, organisational citizenship behaviour (OCB) is enhanced, and turnover intentions are decreased. According to Mallick, Pradhan, Tewari, and Jena (2015), OCB is significantly related to job performance. Organisations that foster good citizenship behaviour are more attractive places to work and can hire and retain the best people. As found in the literature, OCBs are optional pro-social behaviours of an individual, i.e. different from official job requirements and duties that are not a part of the stipulated job description, and they benefit others as well as the organisation (Organ, Podsakoff, & MacKenzie, 2006).

Studies investigating employee performance make a distinction between in-role and extra-role performance. In-role performance refers to what is explicitly required (Bakker & Bal, 2010).

Extra-role behaviours are certain behaviours of employees which are not part of their formal job requirements as they cannot be prescribed or required in advance for a given job; however, they help in the smooth functioning of the organisation as a social system (Bakker & Bal, 2010).

Much of the research that has been conducted on positive factors has focused on the individual level. Hence, the connection between positive practices and organisational effectiveness needs to be investigated further (Wright & Goodstein, 2007).

Specific research problems

Based on the discussion above, the research problems could be summarised as follows: Various studies have been conducted on the concept of thriving at work. However, limited evidence is available regarding personal and contextual factors that influence thriving at work within a higher education environment. First, scientific information is needed on the relationship between job crafting as a personal factor and the high-performance HR practices as a contextual factor and thriving at work independently and jointly. Second, knowledge gaps exist regarding thriving at work, strengths use and deficit correction, and task and contextual performance of academics. Third, scientific information is needed regarding the role of strengths use in terms of ppsychological needs satisfaction in thriving at work and the intention to leave in a higher education institution. Vitality and learning are fundamental for academics at higher education institutions as they contribute towards addressing the skills development needs of South Africa in a demanding environment. Identifying if the use of their strengths should predict psychological needs satisfaction and if that, in turn, predicts thriving. HEIs should invest in research supporting thriving of academic employees in order to help employees adjust to their demanding work context and promote personal development and growth. This will not only improve the short-term effectiveness of academics but also their long-term adaptability to their work context.

The *main research question* in this study was:

What does thriving at work entail and what are the antecedents and outcomes of thriving?

The following more *specific research questions* were posed:
- To what extent do job crafting, as a personal factor, and high-performance HR practices, as a contextual factor, influence thriving at work independently and jointly?
- What is the relationship between perceived organisational support for strengths use and deficit correction, employees' proactive behaviour towards strengths use and deficit

correction on thriving at work, and can it impact the performance of academics in higher education institutions?

- Is there a relationship between strengths use, psychological needs satisfaction, thriving, and intention to leave of academics in higher education institutions?

This study will make the following contributions to the field of industrial psychology: Firstly, it will result in validated models of thriving at work for academics in the HEI context. Secondly, scientific information will be provided regarding the relationship between job crafting, HR practices and thriving at work. Thirdly, it will contribute to the literature by exploring the relationships between perceived organisational support for strengths use and deficit correction, employees' proactive behaviour towards strengths use and deficit correction, thriving and performance of higher education staff. Ultimately, it will result in new scientific information on the relationship between work strengths use, psychological need satisfaction and intention to leave and thriving.

1.3. RESEARCH OBJECTIVES

1.3.1 General Aim

The overall purpose of this study was to learn about thriving of academics from a strengths-based approach (SBA) using a cross-sectional survey design to determine the effects of job crafting and HR practices on the level of thriving of academics. Furthermore, the aim is to understand how strengths use and deficit correction can influence the extent to which academics perform and thrive. Moreover, it sought to determine if academics make use of their strengths, and to what extent these strengths influence their psychological need satisfaction and intention to leave. The main aim was to suggest individual and contextual interventions to create an environment necessary for academics to thrive.

1.3.2 Specific Objectives

Following from the general aim, the specific objectives of this study were to:

- Investigate what thriving at work entails and what the antecedents and outcomes of thriving are.

- Study the relationship between job crafting; high-performance HR practices and thriving in higher education institutions.
- Investigate whether perceived organisational support for strengths use and deficit correction, employees' proactive behaviour towards strengths use and deficit correction can influence thriving at work, and whether it can impact on performance via thriving in higher education institutions.
- Investigate the relationships between strengths use, psychological needs satisfaction, thriving, and intention to leave of academics in higher education institutions.

1.4. RESEARCH METHOD

The research consisted of a literature study and an empirical study.

1.4.1 Literature Study

A literature study will conceptualise the following concepts, their antecedents, consequences and possible relationships: Thriving, strengths-based approach (SBA), deficit-based approach (DBA) human resource practices (HRP), performance (task and contextual), job crafting, intention to leave and need satisfaction.

1.4.2 Research Design

This study followed a quantitative approach – more specifically a cross-sectional design. A quantitative approach was chosen because it is most suited within the field of positive psychology. In fact, Kim, Doiron, Warren, and Donaldson (2018) state that the positive psychology field is dominated by studies using quantitative, correlational and individual-level analyses. However, preferences for methodologies show some variation within and across regions, depending on their contexts and regional concerns. Africa had some qualitative studies, and other parts of the world had a higher percentage of empirical studies employing mixed methods, longitudinal designs, experimental methods, and multi-level analyses.

This study therefore chose to use a quantitative survey to obtain the various views and opinions in a chosen sample, to understand thriving at work aspects of the humanistic experience.

According to Salkind (2009), a cross-sectional method permits the researcher to examine various groups of individuals at a single point in time. Within the cross-sectional design, latent variable modelling was used to assess model fit, as well as direct, indirect, and interaction effects. Latent variable modelling reduces bias, curtailing from measurement error, rendering it possible to assess both direct and indirect effects.

1.4.3 Participants

This study was undertaken with academics at the Vaal University of Technology and the Tshwane University of Technology in the Gauteng Province as well as the Central University of Technology in the nearby Free State Province, South Africa. These institutions were selected because of geographical convenience. UoTs were chosen because they are different from the traditional and comprehensive universities as they are characterised by a) service to industry and community; b) relevance of programmes; c) transfer of technology; d) preparation of a new generation of knowledge workers, and e) emphasis on scholarship, innovation, research and development (CHE, 2016). These changes impinged on the professional environment in which the academics have found themselves, as it is part of their responsibility to ensure that they create an environment for all these characteristics to be met. Achieving this is a tall order, especially taking into consideration that academics are overworked and underpaid, that some lack capacity and that most have the intention to leave academia. In this study, the academic environment was studied from a positive perspective, focusing on individual and contextual aspects of work in order to transform UoTs into better establishments that can contribute to a healthier South Africa through thriving employees.

Convinience sampling was used in this study. The participants of the target population that met practical criteria, such as geographical proximity, easy accessibility, availability at a given time and the willingness to participate were included for the purpose of the study.

1.4.4 Measuring Instruments

In this research, the following measuring instruments were used:

The *Thriving at Work Scale* (TWS) (Porath et al., 2012) consists of 10 items measuring the two dimensions (learning and vitality) of thriving. A Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) is used to rate the 10 items. The alpha coefficient of the total scale was .93. Learning has 5 items. A sample item for learning is "I continue to learn more and more as time goes by." Vitality has 5 items. A sample item for vitality is "I feel alive and vital." The alpha reliability coefficient was .93.

The *Job Crafting Questionnaire* (JCQ) (Slemp & Vella-Brodrick, 2013) was used to measure job crafting. It measured ways in which employees take an active role in initiating changes to the physical, cognitive, or social features of their jobs. The complete measure consists of three dimensions: *task* (e.g. "Introduce new work tasks that better suit your skills or interests"), *relational* (e.g. "Engage in networking activities to establish more relationships") and *cognitive* (e.g. "Think about how your job gives your life purpose"). These three types of activities represent three distinct ways in which employees can shape their work experience. In total, the questionnaire has 15 items, and participants indicate the frequency with which they have engaged in each job crafting activity, from 1 (*hardly ever*) to 6 (*very often*). The Cronbach alphas of the three subscales were all well above the recommended threshold of .70 (Slemp & Vella-Brodrick, 2013). To examine convergent validity of the scale, Slemp and Vella-Brodrick (2013) correlated the job crafting subscales and the total scale with other variables with which they should have been theoretically related – such as job satisfaction, intrinsic goal strivings (work), strengths use, organisational citizenship behaviour, work contentment, work enthusiasm, work-specific positive affect, and work-specific negative affect.

Three scales of the *Basic Psychological Need Satisfaction and Frustration Scale* (BPNSFS) (Chen et al., 2015) were used to measure psychological need satisfaction. The original 24-item BPNSFS was organised in a multidimensional structure of six scales. Three of these scales tapped into experiences of satisfaction of the three psychological needs for autonomy, competence and relatedness. Autonomy (e.g. "I feel a sense of choice and freedom in the things I undertake"), competence (e.g. "I feel confident that I can do things well"), and relatedness (e.g. "I feel close and connected with other people who are important to me").

Items were rated on a five-point Likert scale ranging from 1 (*completely untrue*) to 5 (*completely true*). The subscales showed an adequate internal consistency with Cronbach alphas ranging between .73 and .89. The scale developers employed a CFA to validate the factor structure of the original BPNSFS and found a six-factor model that differentiated between need satisfaction and need frustration (Chen et al., 2015).

The *Strengths Use and Deficit Correction Scale* (SUDCO) (Van Woerkom et al., 2016) was used to measure strengths use and deficit correction in this study. The SUDCO consists of 30 items scored on a seven-point scale ranging from 0 (*almost never*) to 6 (*almost always*) and comprised four dimensions, namely perceived organisational support for strengths use (POSSU), deficit correction behaviour (DCB), strengths use behaviour (SUB) and perceived organisational support for deficit correction (POSDC). POSSU is measured by eight items (e.g. "This organisation gives me the opportunity to do what I am good at"). DCB is measured by seven items (e.g. "At work, I focus on developing the things I struggle with"). SUB is measured by seven items (e.g. "I capitalise on my strengths at work"), and POSDC is measured by eight items (e.g. "In this organisation, I receive training to improve my weak points"). Van Woerkom et al. (2016) found acceptable Cronbach alpha values for the scales: POSSU: $\alpha = .95$; DCB: $\alpha = .89$; SUB: $\alpha = .90$; and POSDC: $\alpha = .90$. The factor structure of the SUDCO was confirmed by Stander and Mostert (2013) and Van Woerkom et al. (2016) using confirmatory factor analyses. Four competing models were tested: a four-factor model, a one-factor model (including all four dimensions), a two-factor model (distinguishing between strengths use and deficit improvement) and another two-factor model (differentiating between organisational and individual dimensions). Convergent validity was established; both strengths use behaviour and deficit correction behaviour were statistically significantly correlated with strengths use ($r = .74$; $r = .56$) and also with proactive behaviour ($r = .51$; $r = .47$) (Mostert, Theron, & De Beer, 2017).

The *Strengths Use Scale* (SUS) (Govindji & Linley, 2007) assesses strengths use, that is, to what degree people use their strengths in a variety of settings. Participants are asked about their strengths, i.e. the things that you can do well or do best, on a response scale varying from 1 (*strongly disagree*) to 7 (*strongly agree*). Principal component analysis of the 14 items showed them to load at .52 to .79 on a single 'strengths use' factor that accounted for 56.2% of the variance and showed good internal consistency and expected correlations with well-being and

positive psychology constructs. This scale is the only scale available to assess strengths use rather than strengths prevalence.

The *High-Performance HR Practices Questionnaire* (HPHRP) (Mostafa & Gould-Williams, 2014) was used to measure employee perceptions of high-performance HR practices using 27 items. The practices included in the current study were divided into ability-enhancing HR practices (selection, and training and development) (e.g. "my organisation's hiring policy and process is fair"). Motivation-enhancing HR practices (job security, promotion and performance-related pay) (e.g. "job security is almost guaranteed to employees in this organisation"). Opportunity-enhancing HR practices (autonomy and communication) (e.g. "I have the opportunity to earn individual bonuses for my performance"). The 27 items were measured using a seven-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Cronbach alpha coefficients for the measures of the seven HR practices ranged from .77 to .92. Discriminant validity of the questionnaire was assessed by comparing the square root of the average variance extracted for each construct with the correlation estimates between constructs. The square root of the variance-extracted estimate for each construct was higher than the corresponding inter-construct correlation estimates, suggesting that all the constructs in the questionnaire are valid (Mostafa & Gould-Williams, 2014).

To measure *job performance*, this study adopted the 9-item scale for 'in-role' or task performance of Goodman and Svyantek (1999). Examples of items measuring employees' task performance behaviour are: "I perform well in the overall job by carrying out tasks as expected", while the item "I assist others with their duties" is one of the seven items describing the contextual performance of employees. All the job performance items will score on a Likert-type scale varying from 0 (*not at all characteristic*) to 6 (*totally characteristic*). The internal reliabilities for 'in-role' performance measures are .90 and .88 respectively (Goodman & Svyantek, 1999).

Extra-role (contextual) performance is measured using the Organisational Citizenship Behaviour Scale (OCBS) (Rothmann & Rothmann, 2010). The OCBS consists of six items: three that measure assistance to co-workers in the organisation ("I give up time to help co-workers who have work or non-work problems") and three that measure assistance to the organisation ("I take action to protect the organisation from potential problems"). Response options range from 1 (*strongly disagree*) to 7 (*strongly agree*). The Cronbach alpha

coefficients for the two scales were .78 (assistance to co-workers) and .80 (assistance to the organisation).

The *Turnover Intention Scale* (TIS) (Sjöberg & Sverke, 2000). It measures the intention to leave the organisation or to stay. The scale is a five-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The scale consists of three items. An example of an item is: "If I was completely free to choose, I would leave this job". The Cronbach alpha coefficient for the TIS was .83 (Sjöberg & Sverke, 2000). The component loadings vary from .73 to .94 (Sjöberg & Sverke, 2000).

1.4.5 Research Procedure

Applications for permission and ethical clearance were made by the researcher to the relevant department of three universities of technology in Gauteng and the Free State to conduct the study. Ethical clearance was also obtained from the Ethics Committee at the university from where the research was undertaken (Ethics number: NWU-HS-2016-0209). The researcher administered the online electronic questionnaire in English through the myresearchsurvey.com platform and this was only sent to academics via the institutions communications department. A cover letter expressing the purpose of the study and highlighting the confidentiality and anonymity of the research project accompanied the survey. Participation in the project was voluntary, and respondents had the option to withdraw at any time. Participants completed an online questionnaire from the middle of February to the middle of September 2017. There was one dataset used for all three articles. Responses to the items were illustrated in an Excel spreadsheet; subsequently, it was converted to an SPSS dataset for analyses.

1.4.6 Statistical Analysis

Statistical analyses were performed using two statistical programs, namely Mplus version 8 (Muthén & Muthén, 1998/2017) and SPSS24 program (IBM Corporation, 2016). Mplus version 8 was used to compute a confirmatory factor analysis. Maximum likelihood estimation with robust standard errors (MLR) in Mplus was used as an estimator. The following indices were used to assess model fit for measurement and structural models: a) absolute fit indices, including the chi-square statistic, standardised root mean residual (SRMR), and root mean square error of approximation (RMSEA); and b) incremental fit indices, including the Tucker-

Lewis index (TLI) and comparative fit index (CFI) (West, Taylor, & Wu, 2012). TLI and CFI values should be higher than .90. RMSEA and SRMR values lower than .08 indicate a close fit between the model and the data.

Estimate of scale reliability (ρ) was used for each scale (Raykov, 2009). The statistical significance was set at $p < .01$. The practical significance of correlations and percentages of variance explained were assessed by using the guidelines developed by Cohen (1988). A correlation of .5 is large, .3 is moderate, and .1 is small. Cohen (1988) provides the following guidelines regarding the practical significance of $R^2 = .25$ – large effect; $R^2 = .09$ – medium effect, and $R^2 = .09$ – small effect. The SPSS24 program (IBM Corporation, 2016) was used to compute descriptive statistics, and moderating effects were examined between continuous variables using hierarchical regression analyses (Hayes, 2018). Indirect effects were computed to determine whether any relationships were indeed indirectly affected by independent variables; the procedure explained by Hayes (2018) was used. Bootstrapping was used to construct two-sided bias-corrected 95% confidence intervals (CIs) to evaluate indirect effects. The number of bootstrap samples was set to 10 000. Lower CIs and upper CIs were reported.

1.5 ETHICAL CONSIDERATIONS

The researcher was expected to attend ethics training at the university from where the research was undertaken. After successful completion of the training, an ethical clearance application form had to be completed. The application form was reviewed by an ethics committee panel, and an interview was conducted with the Research Ethics Committee and the researcher. After the committee was satisfied with the application and interview, ethical clearance was obtained from the Ethics Committee (Ethics number: NWU-HS-2016-0209).

Once permission had been obtained from the university from where the research was undertaken, the researcher contacted the ethics gatekeepers of the three universities of technology in Gauteng and the Free State. Permission and ethical clearance were granted to conduct the study and upon completion of the study, feedback was requested by the management of the participating universities.

The researcher administered the online electronic questionnaire in English via an independent contractor (myresearchsurvey.com) platform through the universities' communications liaison officers. A cover letter clarifying the purpose of the study and highlighting the confidentiality and anonymity of the research project supplemented the survey and emphasised that participation in the survey was voluntary. Participants were required to tick an electronic consent box confirming that the information obtained via the research would be used for research purposes only. These participants were allowed three weeks to complete the English questionnaires, which would take approximately 30-45 minutes of their time. Participants were informed that they may become bored or tired due to the length of the survey and they were advised to complete the questionnaire at their own pace and convenience as there was an option to return to the survey at any time. A week before the final submission of the questionnaires, reminders were sent out to the relevant parties – again via the universities' communications liaison officers. The completed surveys were returned via the independent contractor, and data analysis then took place. Responses were captured by the Statistical Consultation Services of the NWU (and randomly inspected by the researcher) on a password-protected Excel spreadsheet. After the data had been captured, only the researcher and her supervisor had access to the final spreadsheet. The data (hardcopy) will be stored for a minimum of five years in a storeroom to which only authorised people have access. A password-protected master copy of the spreadsheet has been stored on Google Drive. Future use of data will have to be authorised by the principal investigator and in such instances, no identifying information will be released (e.g. the details provided on the consent letters).

1.6 CHAPTER LAYOUT

Chapter 1: Introduction
Chapter 2: Article 1: Thriving of academics: The role of job crafting and human resource practices
Chapter 3: Article 2: Strengths use and deficit correction, thriving, and performance of academics at universities of technology
Chapter 4: Article 3: Strengths use, training and development, thriving and turnover intention: The mediating effects of basic psychological need satisfaction
Chapter 5: Conclusions, limitations and recommendations

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CHAPTER 2

ARTICLE 1

Thriving of Academics: The Role of Job Crafting and Human Resource Practices

Abstract

This study aimed to investigate the relationship between job crafting, high-performance human resource management practices and the thriving of academics in higher education institutions. A cross-sectional survey design was used. A convenience sample of 276 academic employees from three universities of technology in South Africa participated in the study. The participants completed the Job Crafting Questionnaire, the High-Performance Human Resource Practices Questionnaire, and the Thriving at Work Scale. As hypothesised, thriving, job crafting, and high-performance human resource practices were positively correlated. Additionally, a significant interaction between job crafting and high-performance human resource practices was found. The relationship between job crafting and thriving was found to differ to the extent to which individuals perceived high-performance human resource practices. Specifically, when human resource practices were perceived to be deficient, employees that obtained high scores on job crafting thrived more compared to employees who obtained low scores on job crafting. However, when human resource practices were perceived to be good, there were smaller differences in the levels of thriving between those with high or low scores on job crafting. The implications of these results are discussed.

Key terms: Thriving, job crafting, human resource practices, higher education

Introduction

The well-being of individuals is of great importance to ensure that they function well at work. Well-being enables individuals to thrive and achieve their full potential for the benefit of themselves and their institutions (Carmeli & Spreitzer, 2009; Taneva, Arnold, & Nicolson, 2016). Studies have shown that thriving is positively associated with critical organisational outcomes such as employee health, high job performance, reduced absenteeism, innovative work behaviour, organisational citizenship behaviour, organisational commitment, development, and overall job satisfaction, as well as lower levels of burnout, job strains, turnover intentions and actual turnovers (Carmeli & Spreitzer, 2009; Cullen et al., 2015; Niessen, Sonnentag, & Sach, 2012; Paterson, Luthans, & Jeung, 2013; Porath, Spreitzer, Gibson, & Granett, 2012; Wallace, Butts, Johnson, Stevens, & Smith, 2016).

Academics who are thriving experience growth and motion marked by a sense of feeling energised and alive (vitality) and recognise that they are incessantly improving and getting better at what they do (learning) (Spreitzer, Sutcliffe, Dutton, Sonenshein, & Grant, 2005). Thriving serves an adaptive function in that it helps individuals to navigate and change their work contexts to promote and sustain their professional development and efficiency (Spreitzer et al., 2005). Hence, thriving serves as a gauge of a person's progress at work and thus assists employees to increase both their short-term functioning and longer-term development (Spreitzer et al., 2005). According to Herwitz (2018), academic staff at South African higher education institutions experience depletion and demoralisation, which are not acknowledged or addressed by institutions and the Ministry of Education.

Positive psychological constructs like happiness (Field & Buitendach, 2011), flourishing (Janse van Rensburg, Rothmann, & Diedericks, 2017a, 2017b) and work engagement (Barkhuizen, Rothmann, & Van de Vijver, 2014; Takawira, Coetzee, & Schreuder, 2014), which are similar to yet different from thriving, have been examined in the South African higher education context. These studies showed that sound human resource management practices (Barkhuizen et al., 2014), person-environment fit (Janse van Rensburg et al., 2017a), and manager and supervisor support (Janse van Rensburg et al., 2017b) predict positive psychological functioning (Porath, Spreitzer, Gibson, & Garnett, 2012).

Compared to constructs like burnout, work engagement and job satisfaction, workplace thriving has not enjoyed much attention in academic literature and practice. A better understanding is required of how and why specific factors promote thriving at work which can have implications for human resource management scholarship (Kira & Balkin, 2014). Also, positive theories, such as thriving, offer new starting points for the consideration of well-being at work (Spreitzer et al., 2005). There is evidence of the relationship between thriving at work and various desired individual and organisational outcomes (Cullen, Gerbasi, & Chrobot-Mason, 2015; Paterson, Luthans, & Jeung, 2014). This study proposes individual and contextual enablers of agentic work behaviours that may be related to thriving at work.

Firstly, job crafting may play a role in thriving at work. Job crafting considers the role of proactive and self-initiated behaviours that academics can use to alter and craft their work roles (Berg, Dutton, & Wrzesniewski, 2013; Wrzesniewski & Dutton, 2001). Job crafting predicts employee engagement, organisational commitment, flourishing, psychological well-being and helping behaviours (Bakker, Tims, & Derks, 2012; Brenninkmeijer & Hekkert-Koning, 2015; Demerouti, Bakker, & Gevers, 2015; Leana, Appelbaum, & Shevchuk, 2009; Petrou, Demerouti, & Schaufeli, 2015; Slemp & Vella-Brodrick, 2013, 2014; Van Wingerden, Bakker, & Derks, 2017). However, limited evidence could be found of job crafting studied in relation to thriving at work.

Secondly, an essential factor in the organisational context that has been overlooked in prior research on thriving at work is the quality of human resource (HR) practices. HR practices affect employee well-being (Guest, 2002, 2011; Huang, Ahlstrom, Lee, Chen, & Hsieh, 2016). More specifically, HR practices (whether labelled high-performance or high-commitment HR practices) such as training, participation, and performance-related pay are associated with healthier work environments and lower levels of burnout (Castanhera & Chambel, 2010; Nishii, 2006).

Thriving at Work

Carver (1998) defined thriving as a positive response to a challenge. Thriving refers to "the psychological state in which individuals experience both a sense of vitality (i.e. the positive feeling of having energy available) and a sense of learning (i.e. the sense that one is acquiring, and can apply, knowledge and skills) at work" (Spreitzer et al., 2005, p. 538).

Spreitzer et al. (2005) described how thriving at work is similar to, yet distinct from, constructs such as resilience, flourishing, subjective well-being, flow, work engagement and self-actualisation. As they described, the fundamental distinguishing characteristic of thriving at work is the combination of learning and vitality, both of which are necessary for employees to thrive. Therefore, thriving reflects both the affective and cognitive component of psychological experience and combines the hedonic and eudemonic perspective of psychological functioning (Spreitzer et al., 2005).

The socially embedded model of thriving at work (Spreitzer et al., 2005) suggests that three types of agentic behaviours are associated with thriving. These behaviours are task focus, i.e. focussing behaviours and attention on job tasks and responsibilities; exploration, i.e. experimentation, innovation, risk-taking, and discovery to stretch and grow in new directions; and heedful relating, i.e. looking out for one another to heedfully connect to the social/relational environment. If the satisfactory enabling conditions and resources are present, there is an increased likelihood that individuals will thrive, even under onerous conditions that seem to exist within the higher education institutions in South Africa.

Porath et al. (2012) developed a ten-item scale to measure thriving at work. Although scholars have highlighted the importance of thriving for organisations (Gerbasi, Porath, Parker, Spreitzer, & Cross, 2015; Spreitzer & Porath, 2012; Spreitzer, Porath, Gibson, & Garnett, 2012), "research on thriving at work has been quite sparse" (Niessen, Sonnentag, & Sach, 2012, p. 468). Nonetheless, studies on thriving are becoming an essential field of study and are steadily growing in number as the phenomenon produces many positive outcomes for organisations. Some of these studies have underlined the importance of thriving to work-related outcomes, such as individual task performance, innovative work behaviours, organisational citizenship behaviours, organisational commitment, and taking the initiative for career development, self-development and job satisfaction (Gerbasi et al., 2015). Thriving at work has also been linked to critical individual outcomes such as development, overall health (Carmeli & Spreitzer, 2009; Porath, Gibson, & Spreitzer, 2008), less burnout and strain (Porath et al., 2012; Spreitzer et al., 2012) and higher engagement (Gerbasi et al., 2015).

Job Crafting

In the ever-changing academic environment, it is essential to understand the ways to enhance the well-being of academics in higher education institutions for desirable work-related outcomes. Wrzesniewski and Dutton (2001) suggest job crafting as a possible strategy. Job crafting refers to making proactive alterations to the content and confines of one's job and relationships with others to change the meaning of one's work and the social environment at work. Academics have to anticipate and create changes in how work is performed, based on increases in uncertainty and dynamism (Grant & Parker, 2009), which is prevalent in higher education institutions. This deliberation activity can help them cope with ongoing changes. Therefore, job crafting can be viewed as a strategic advantage during a change in which several positive outcomes may present themselves, including job satisfaction, work engagement and thriving at work (Bakker, 2011; Ghitulescu, 2007).

Job crafters may participate in three types of crafting: cognitive crafting, which encompasses altering task-related boundaries and mindsets; task crafting, which comprises varying the content of work – the number, scope and type of job responsibilities; and relational crafting, which includes transmuting the quality and amount of interaction with others while working. When individuals craft their jobs in these ways, the jobs become more meaningful or enjoyable to them. However, there is evidence that multiple positive individuals, group and organisational outcomes arise when employees job craft, mostly in the areas of employee well-being and performance (Rosso, Dekas, & Wrzesniewski, 2010).

It is important to realise that job crafting is not a single event. It is a process in which an employee engages over a period, and although job crafting is a form of proactive behaviour, i.e. actions that initiate and create change (Griffin, Neal, & Parker, 2007), it occurs in the context of employees' prescribed jobs. These are marked by prescribed tasks, expectations, and positions in the organisational hierarchy. Thus, any of these features may limit employees' perceptions of their opportunities to proactively change their jobs. Leana et al. (2009) found that educators who took part in job crafting displayed improved performance compared to those who did not engage in job crafting. Furthermore, Peral and Geldenhuys (2016) uncovered that teachers who are given the opportunity to craft their working practices might experience increased subjective well-being (i.e. psychological meaningfulness and work engagement), leading to some positive organisational outcomes.

High-performance HR Practices

Job crafting in itself may not be sufficient for employee thriving. Wrzesniewski and Dutton (2001) found that organisations are able to stimulate job crafting through HR practices. Such HR practices can be considered a 'signal' from the organisation to employees that they are allowed to job craft (Den Hartog, Boselie, & Paauwe, 2004). Hence it is suggested that the variable of high-performance HR practices is a compelling prospect for interacting with job crafting to predict thriving of employees.

There always has been an interest in understanding how HR practices contribute to organisational outcomes and competitive advantages (Zhang, Wan, & Jia, 2009). However, more recently, however, scholars have called for more research which examines individual-level outcomes of employee perceptions of HR management practices as it may be more proximal predictors of individual attitudes and behaviours (Nishii, Lepak, & Schneider, 2008). High-performance HR systems are defined as "groups of separate but interconnected HR practices designed to enhance employees' skills and effort" (Takeuchi, Lepak, Wang, & Takeuchi, 2007, p. 1069). Beardwell and Claydon (2010) define high-performance HR systems as a combination of HR practices intended for enhancing the commitment, flexibility and quality of employees. These practices foster employees' shared perceptions of a supportive organisational environment that encourages participation in decision-making and motivates discretionary effort that contributes to improved organisational performance and sustained competitive advantage (Appelbaum, Bailey, Berg, & Kalleberg, 2000; Sun, Aryee, & Law, 2007).

Even though researchers continue to investigate the fundamental mechanisms linking the utilisation of high-performance HR practices to firm outcomes (Chadwick & Dabu, 2008), there is a lack of agreement on the specific practices that should be included in high-performance work systems. However, the most widely used practices include recruitment and selection, training and development, promotion, job security, performance-related pay, communication, and autonomy (Iverson & Zatzick, 2007; McClean & Collins, 2011; Price, 2011).

Recruitment and selection are critical for hiring employees who are a good fit for the organisation. These practices usually create positive work environments for highly skilled

employees who are likely to perform in ways that benefit the organisation (Iverson & Zatzick, 2007; McClean & Collins, 2011). Ample training and development are essential for furnishing employees with current knowledge, skills and competencies. Such activities enhance employees' flexibility and increase their loyalty and commitment to the organisation (Iverson & Zatzick, 2007).

Providing promotion opportunities supports employees' emotional attachment to and identification with the organisation. These opportunities signal to employees that the employer is concerned about their development and can invest in their advancement as employees (McClean & Collins, 2011). Job security reduces employees' fear of losing their jobs. This will allow them to contribute freely to enhanced productivity and to act with the long-term in mind (Price, 2011). Performance-related pay will provide employees with a feeling of being rewarded. This is more likely to increase employees' commitment to the organisation and encourage them to contribute more (McClean & Collins, 2011).

Effective communication helps employees understand their tasks and roles within the organisation. By communicating effectively with employees, they might value the reasons behind organisational decisions and sanctioned procedures which, in turn, is more likely to increase their trust and commitment to the organisation (Den Hartog & Belschak, 2012). Lastly, autonomy provides employees with sovereignty, independence and foresight when carrying out their work assignments (Morgeson & Humphrey, 2006).

It is vital to have high-performance HR practices aimed at managing employees in organisations in such a way that they work together to select, develop, and motivate a workforce that has appropriate qualities and that uses these qualities in work-related activities with flexible effort. It can result in employee outcomes such as job satisfaction, organisational commitment, work motivation, intention to quit and citizenship behaviours (Alfes, Shantz, Truss, & Soane, 2013; Boon, Den Hartog, Boselie, & Paauwe, 2011; Gould-Williams & Gatenby, 2010). However, it is not clear exactly how this relationship operates. Organisational outcomes do not originate from the HR practices themselves, but rather from the human efforts surfacing from these HR practices (Way, 2002).

HR practices have the desired consequences on employee attitudes and behaviours only to the degree that they are consistently experienced and perceived by employees as intended (Bowen

& Ostroff, 2004; Nishii, 2006). However, employees all perceive and react differently to HR practices. Thus, high-performance HR systems have utility to the extent that they positively affect employees and inspire them to contribute to critical organisational outcomes. Scholars have presented a convincing body of empirical evidence supporting the high-performance HR practice–performance relationship (Combs, James, Liu, Hall, & Ketchen, 2006; Messersmith, Patel, Lepak, & Gould-Williams, 2011). However, limited evidence exists on the effects of high-performance HR practices on more connected outcomes, namely employee attitudes and behaviours.

Aim and Hypotheses

This study tested the idea that job crafting and high-performance HR practices predict thriving. It further investigated the interaction effect between job crafting and high-performance HR practices on thriving at work. The following hypotheses were set for this study:

Hypothesis 1: High-performance HR practices positively predict thriving at work.
Hypothesis 2: Job crafting positively predicts thriving at work.
Hypothesis 3: High-performance HR practices interact with job crafting to effect thriving at work.

Method

Research Design

This study used a cross-sectional survey design, as data were collected at one point in time. According to Creswell (2012), cross-sectional survey designs are useful in collecting data relative to "current attitudes, opinions, or beliefs" (p. 377). Data were gathered by utilising questionnaires regarding thriving, job crafting and perceptions of human resource practices of academic employees.

Participants

This study was conducted among academics at three universities of technology. A total sample of 276 was included. The respondents were from the Vaal University of Technology (43%), Tshwane University of Technology (40%) and Central University of Technology (17%). Most participants (80.4%) were permanently employed, lecturers. Biographical and employee-related characteristics of the participants are reported in Table 1.

Table 1

Characteristics of the Participants (n = 276)

Item	Category	Frequency	Percentage
Gender	Male	123	44.6
	Female	153	55.4
Age	20 to 30 years	38	13.7
	31 to 40 years	73	26.4
	41 to 50 years	87	31.5
	51 to 60 years	58	21.0
	Over 60	20	7.2
Home language	Afrikaans	109	39.5
	English	66	23.9
	African language	101	36.6
Highest qualification	Diploma	7	2.5
	Postgraduate diploma	7	2.5
	Degree	20	7.2
	Honours degree	31	11.2
	Master's degree	128	46.4
	Doctoral degree	83	30.1
Tenure	Less than five years	51	18.4
	5 to 10 years	70	25.3
	11 to 15 years	46	16.6
	16 to 20 years	42	15.1
	21 to 25 years	31	11.2
	More than 25 years	36	13.1

The results in Table 1 show that a sum of 44.6% of the sample were males, while 55.4% were females. The participants ranged from age 20 years to 79 years. The mean age of the

participants was 43.83 (*SD* = 11.10). Most participants were South African (88.8%), married (67%) and spoke Afrikaans (39.5%). Furthermore, nearly half of the respondents (46.4%) held a master's degree, while majority of respondents (81.6%) had served more than five years in an academic profession.

Measuring Instruments

In this study, the following measuring instruments were used: The Thriving at Work Scale, the Job Crafting Questionnaire and the High-Performance HR Practices Questionnaire.

The *Thriving at Work Scale* (TWS) (Porath et al., 2012) was used to measure the level of thriving. It is a 10-item scale measuring two dimensions: learning (e.g. "I continue to learn more and more as time goes by") and vitality ("I feel alive and vital"). Each subscale consists of five items. A Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) is used to rate the 10 items. The alpha coefficient was .93 (Porath et al., 2012).

The *Job Crafting Questionnaire* (JCQ) (Slemp & Vella-Brodrick, 2013) was used to measure job crafting. It measures ways in which employees take an active role in initiating changes to the physical, cognitive, or social features of their jobs. The full measure consists of three dimensions: *task*, e.g. "Introduce new work tasks that better suit your skills or interests"; *relational*, e.g. "Engage in networking activities to establish more relationships" and *cognitive*, e.g. "Think about how your job gives your life purpose". These three types of activities represent three distinct, yet substantive ways in which employees can manipulate their work experience. In total, the questionnaire has 15 items, and participants indicate the frequency with which they have pursued in each job-crafting activity – on a scale ranging from 1 (*hardly ever*) to 6 (*very often*). The Cronbach alphas of the three subscales were over the recommended threshold of .70 (Slemp & Vella-Brodrick, 2013).

The *High-Performance HR Practices Questionnaire* (HPHRP) (Mostafa & Gould-Williams, 2014) was used to measure employee perceptions of high-performance HR practices using 27 items. The practices included in the current study were divided into ability-enhancing HR practices (selection, and training and development) "my organisation's hiring policy and process is fair"; motivation-enhancing HR practices (job security, promotion and performance-related pay) "job security is almost guaranteed to employees in this organisation"; and

opportunity-enhancing HR practices (autonomy and communication) "I have the opportunity to earn individual bonuses for my performance". The 27 items were measured using a seven-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Cronbach alpha coefficients for the measures of the seven HR practices ranged from .77 to .92. Discriminant validity of the questionnaire was assessed by comparing the square root of the average variance extracted for each construct with the correlation estimates between constructs. The square root of the variance-extracted estimate for each construct was higher than the corresponding inter-construct correlation estimates, suggesting that all the constructs in the questionnaire are valid (Mostafa & Gould-Williams, 2014).

A *biographical questionnaire* was developed to measure socio-demographic and biographical data of participants. Items included were gender, age, marital status, qualifications, job position held at the University of technology, tenure, home language of choice, race, nationality, and type of contract.

Data Analysis

Mplus Version 8.2 (Muthén & Muthén, 1998/2018) was utilised to carry out data analysis and SPSS24 (IBM Corporation, 2016) was used to compute descriptive statistics and to test interaction effects. In Mplus, the maximum likelihood estimation with robust standard errors (MLR) was used as an estimator. Scale reliabilities were computed using a confirmatory factor analysis-based estimate of scale reliability (ρ) (Raykov, 2009). Pearson product-moment correlation coefficients were used to measure the proposed relationships between constructs in the study. To determine the practical significance of the results (Cohen, 1988) effect sizes were used. Cut-off points of .30 (medium effect) and .50 (large effect) were placed for the practical significance of the correlation coefficients (Cohen, 1988). The confidence interval level for statistical significance was set at a value of 95% ($p \le .05$).

The following indices were used to assess model fit for measurement and structural models: i) absolute fit indices, plus the chi-square statistic (the test of absolute fit of the model), standardised root mean residual (SRMR), root mean square error of approximation (RMSEA), and ii) incremental fit indices, for example comparative fit index (CFI) and Tucker-Lewis index (TLI) (West, Taylor, & Wu, 2012). CFI and TLI values should generally be higher than .90.

RMSEA and SRMR values lower than .08 point to a close fit between the model and the data. Furthermore, to compare competing measurement models Akaike information criterion (AIC) and Bayesian information criterion (BIC) values were used (Kline, 2010).

Farrell (2010) recommends that researchers establish discriminant validity in latent variable analyses. Discriminant validity of a latent variable exists if it accounts for more variance in its observed variables than measurement error and other variables in a measurement model. According to Fornell and Larcker (1981), the validity of indicators and the construct is questionable if discriminant validity cannot be shown. To establish the discriminant validity of the measures, the average variance explained (AVE) for each construct was compared with the shared variance between the constructs (Farrell, 2010). A latent variable has discriminant validity if the AVE for a construct is greater than its shared variance with any other construct.

A moderation model with the effect of job crafting on thriving moderated by high- performance HR practices was estimated using PROCESS Version 3 (Hayes, 2018) in SPSS24 (IBM Corporation, 2016). The independent variable and the moderator were not centred given that factor scores were used in the analysis.

Research Procedure

The ethics committee at the North-West Univesity where the research was done issued ethical clearance (Ethics number: NWU-HS-2016-0209). The researcher communicated with the research ethics gatekeepers of the three universities of technology in the Free State and Gauteng and obtained permission and ethical clearance from each to conduct the study. An electronic questionnaire in English was distributed online via the myresearchsurvey.com platform to all academic staff of all three institutions. A cover letter was attached clarifying the purpose of the survey as well as highlighting that the research project was confidential and anonymous. Participation in the survey was voluntary, and respondents to withdraw at any time. Participants completed the questionnaire online between mid-February and mid-September 2017. The raw data were captured and converted to an SPSS dataset for analysis.

<center>**Results**</center>

The results of tests of competing measurement models thereafter the results of alternative structural models are described.

Testing the Measurement Model

Seven measurement models were tested using confirmatory factor analysis. The three-factor measurement model and alternative models were assessed to test whether each of the measurement items would load significantly onto the scales with which they were related.

Model 1 comprised of three latent variables: thriving, job crafting and human resource practices. Thriving consisted of two first-order latent variables: vitality (measured by five items) and learning (measured by five items). Job crafting consisted of three first-order latent variables: task crafting (measured by five items), cognitive crafting (measured by five items) and relational crafting (measured by five items). Human resource practices consist of seven separate factors. All the latent variables in model 1 were allowed to correlate.

Models 2, 3, 4 and 5 followed the same template as Model 1. However, in Model 2, thriving was modelled as two separate but related latent variables (and not a second-order latent variable consisting of two first-order latent variables). In Model 3 job crafting was modelled as three separate but related latent variables (rather than a second-order latent variable consisting of three first-order latent variables). In Model 4 human resource practices were modelled as seven separate but related latent variables. In Model 5 thriving was modelled as a single latent variable (rather than a second-order latent variable consisting of two first-order latent variables). In Model 6 job crafting was modelled as a single latent variable (rather than a second-order latent variable consisting of three first-order latent variables) followed the same template with all items of thriving were ignored. And finally, in Model 7 human resource practices was modelled as a single latent variable (rather than a second-order latent variable consisting of seven first-order latent variables).

Table 2 presents the goodness-of-fit statistics for the five competing measurement models described above.

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Table 2

Fit Statistics of Competing Measurement Models

Model	χ^2	*df*	TLI	CFI		RMSEA	SRMR	AIC	BIC
1	1840.50	1233	.93	.93	.04	[.038, .046]	.05	44152.26	44865.47
2	1818.36	1226	.93	.93	.04	[.038, .046]	.05	44140.78	44879.35
3	1826.12	1217	.92	.93	.04	[.039, .047]	.05	44166.32	44937.47
4	1930.28	1259	.92	.92	.04	[.040, .048]	.06	44207.42	44826.51
5	1796.21	1208	.93	.93	.04	[.038,.046]	.05	44150.26	44953.99
6	2308.59	1261	.87	.88	.05	[.051,.058]	.06	44647.15	45258.99
7	2344.53	1262	.87	.88	.05	[.052,.059]	.07	44684.28	45292.51

χ^2, chi-square statistic; *df*, degrees of freedom; TLI, Tucker-Lewis index; CFI, comparative fit index; RMSEA, root mean square error of approximation; SRMR, standardised root mean square residual; AIC, Akaike information criterion; BIC, Bayes information criterion

AIC and BIC fit statistics were used, including other fit indices in this study, to compare alternative measurement models. Although the AIC and BIC values of Model 2 were the lowest, they were not significantly different from the values of Model 4. For theoretical reasons, as well as in the interest of parsimony, Model 4 was used (AIC = 44207.42, BIC = 44826.51). This model yielded the following fit statistics: χ^2 = 1930.28; *df* = 1259; $p < .001$; TLI = .92; CFI = .92; RMSEA = .04; SRMR = .06. These statistics display a good fit for the hypothesised model.

Model Development

The analysis continued in an exploratory mode to improve the fit of the selected model. Based on modification indices (MIs), two items, item 21 ("The communication between other employees and me at work is good") and item 22 ("The communication between me and the managers/supervisors at work is good") in the High-Performance HR questionnaire, experienced a correlated error. Item 21 was removed because it significantly reduced the model fit.

The revised Model 4.1 compared to Model 4 fitted the data better (AIC= 44165.00, BIC= 44787.72; χ^2 = 1892.69, df = 1258; $p < .001$; TLI = .92; CFI = .93; RMSEA = .04; SRMR = .06). Items all loaded on their respective constructs as expected. The standardised regression coefficients were all statistically significant ($p < .001$).

Descriptive Statistics and Correlations of the Scales

The descriptive statistics, reliability coefficients of the measuring instruments, the product-moment correlation coefficients between the constructs as well as the average variance extracted are reported in Table 3.

The results in Table 3, reveals that the reliabilities of all the measuring instruments were acceptable, ranging from .77 to .95 (Nunnally & Bernstein, 1994). The TWS dimensions of learning and vitality had good reliability with values ranging from .91 to .95. Table 3 provides the correlation coefficients of the study variables. Task, cognitive and relational dimensions of job crafting were all practically and statistically significantly related to thriving at work dimensions of learning and vitality with a medium effect. Selection, training and development, job security, promotion, communication and reward were all practically and statistically significantly related to the thriving at work dimensions of learning and vitality with a medium effect. However, job design was practically and statistically significantly related to the thriving at work dimensions of vitality (medium effect) and learning (small effect).

The discriminant validity of the subscales of all measuring instruments was acceptable. The average variance extracted of each subscale was larger than the squared correlations between the relevant subscale and each of the other subscales.

Table 3

Reliability Coefficients, Correlations, AVE and Shared Variance of the Scales (n = 276)

Variable	ρ	Mean	*SD*	1	2	3	4	5	6	7	8	9	10	11	12
1. Vitality	.95	5.36	1.33	**.78**	.48	.12	.17	.14	.14	.13	.12	.17	.10	.18	.11
2. Learning	.91	5.93	0.99	.69^{++}	**.67**	.10	.14	.12	.13	.12	.10	.14	.10	.15	.10
3. Job Crafting – Task	.85	4.09	1.03	.35^{+}	.32^{+}	**.53**	.29	.24	.10	.10	.04	.10	.40	.56	.04
4. Job Crafting – Cognitive	.88	4.40	1.18	.41^{+}	.38^{+}	.54^{++}	**.60**	.32	.10	.10	.10	.10	.10	.10	.10
5. Job Crafting – Relational	.77	3.68	1.09	.37^{+}	.35^{+}	.49^{+}	.57^{++}	**.42**	.10	.10	.10	.10	.04	.09	.10
6. HRP – Selection	.91	3.85	1.63	.38^{+}	.36^{+}	.25	.29	.27	**.72**	.40	.35	.50	.29	.53	.34
7. HRP – Training and development	.90	4.60	1.48	.36^{+}	.34^{+}	.24	.28	.26	.63	**.68**	.31	.45	.26	.49	.30
8. HRP – Job Security	.87	4.37	1.53	.34^{+}	.31^{+}	.22	.26	.24	.59^{++}	.56^{++}	**.63**	.40	.23	.42	.26
9. HRP – Promotion	.91	3.53	1.75	.41^{+}	.38^{+}	.27	.31^{+}	.29	.71^{++}	.67^{++}	.63^{++}	**.73**	.53	.61	.38
10. HRP – Job Design	.92	5.21	1.46	.31^{+}	.29	.20	.24	.22	.54^{++}	.51^{++}	.48^{+}	.57^{++}	**.78**	.35	.22
11. HRP – Communication	.85	4.64	1.48	.42^{+}	.39^{+}	.28	.32^{+}	.30^{+}	.73^{++}	.70^{++}	.65^{++}	.78^{++}	.59^{++}	**.57**	.41
12. HRP – Reward	.92	3.03	1.70	.33^{+}	.31^{+}	.22	.26	.23	.58^{++}	.55^{++}	.51^{++}	.62^{++}	.47^{+}	.64^{++}	**.74**

Note: AVE is reported on the diagonal of the correlation and squared correlation above the diagonal.

All correlations are statistically significant ($p < .01$)

+ Correlation is practically significant $r \geq .30$ (medium effect)

++ Correlation is practically significant $r \geq .50$ (large effect)

Table 4

Standardised Regression Coefficients of Thriving on Job Crafting and High-performance HR Practices

Variable	Estimate	SE	Estimate/SE	p
Job crafting	.44	.07	6.13	.0001**
High-performance HR practices	.34	.08	4.60	.0001**

Note: SE: standard error; Est/SE: estimate divided by standard error; p: obtained significance value.
** $p < .01$.
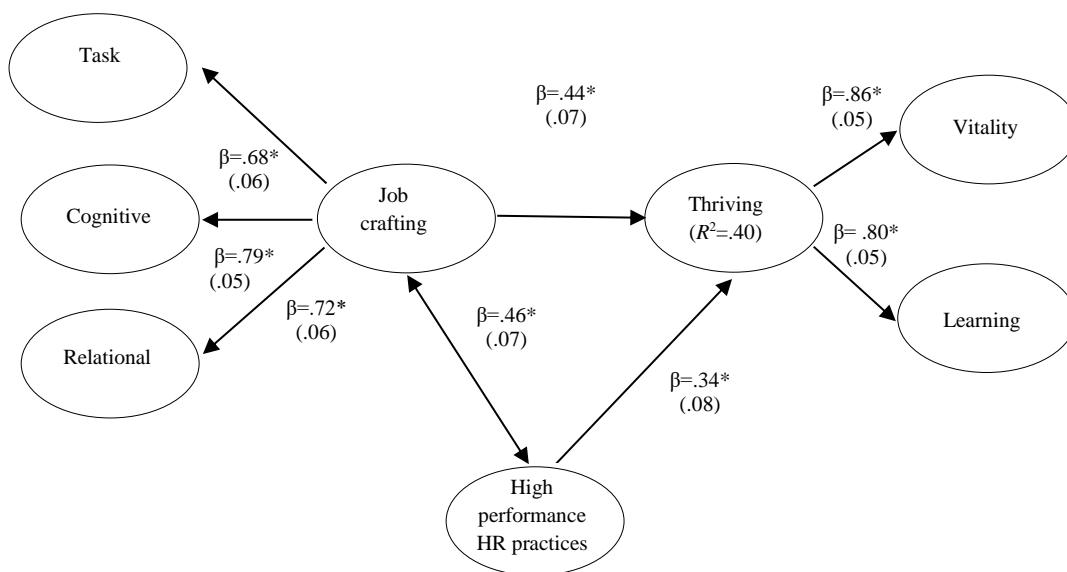
Figure 1. The structural model (standardised solution with standard errors in parentheses)
Note: All the regression coefficients are statistically significant ($p < .01$)

Table 4 shows that thriving at work is predicted by job crafting (β = .44, SE = .07, $p < .001$) and high-performance human resource practices (β = .34, SE = .08, $p < .001$). Selection (β =.82, SE = .03, $p < .001$), Training and development β =.78, SE = .04, $p < .001$), Job security (β =.72, SE = .04, $p < .001$), Promotion (β =.87, SE = .02, $p < .001$), Job design (β =.66, SE = .05, $p < .001$), Communication (β =.90, SE = .03, $p < .001$), and Reward (β =.71, SE = .04, $p < .001$). Hypotheses 1 and 2 are accepted.

Moderating effects

Consistent with the guidelines suggested by Hayes (2018) for examining moderating effects between continuous variables, hierarchical regression analyses were performed to examine the extent to which HR practices might moderate the influence of job crafting on thriving of academics. With thriving as the dependent variable, standardised job crafting scores (predictor) were entered in the first step, followed by standardised HR practices scores (moderator) in the second step. To examine the possibility of a significant moderating effect, standardised interaction scores between job crafting and HR practices scores were then entered in the third and last step. According to Hayes (2018), evidence of a moderating effect is present when the interaction term between the predictor and moderator is significant. Regression results for the moderation effect are presented in Table 5.

Table 5

Regression Results for the Moderation Effect

Variable	Estimate	SE	T	*p*	LLCI	ULCI
Constant	.09	.04	2.24	.03	.01	.17
Job crafting	.91	.08	11.88	.00	.76	1.06
High-performance HR practices	.28	.04	7.83	.00	.21	.35
Interaction	-.24	.05	-4.98	.00	-.33	-.14

Note: SE: standard error; Est/SE: estimate divided by standard error; p: obtained significance value.
* *p* < .05; ** *p* < .01.

The interaction between job crafting and HR practices accounted for a significant addition of 3% in the variance of thriving. The complete regression model accounted for 62% of the variance in thriving (F (3, 272) = 146.74, $p < .001$). Table 4 shows that the interaction of job crafting and high-performance HR practices is significant (β = -.24, SE = .05, t = -4.98, $p < .01$ [-.33. -.14]). High-performance HR practices were found to moderate the relationship between job crafting and thriving significantly. Overall, these results indicate that high-performance HR practices have a direct influence on thriving beyond what can be accounted for by job crafting and moderate the relation between job crafting and thriving.

To examine the interaction effects that emerged, we plotted the simple slopes of the job crafting-thriving linkage at the 16th, 50th and 84th percentiles, which correspond to a standard deviation below the mean, the mean and a standard deviation above the mean (Hayes, 2018). We also tested whether each slope was statistically significant.
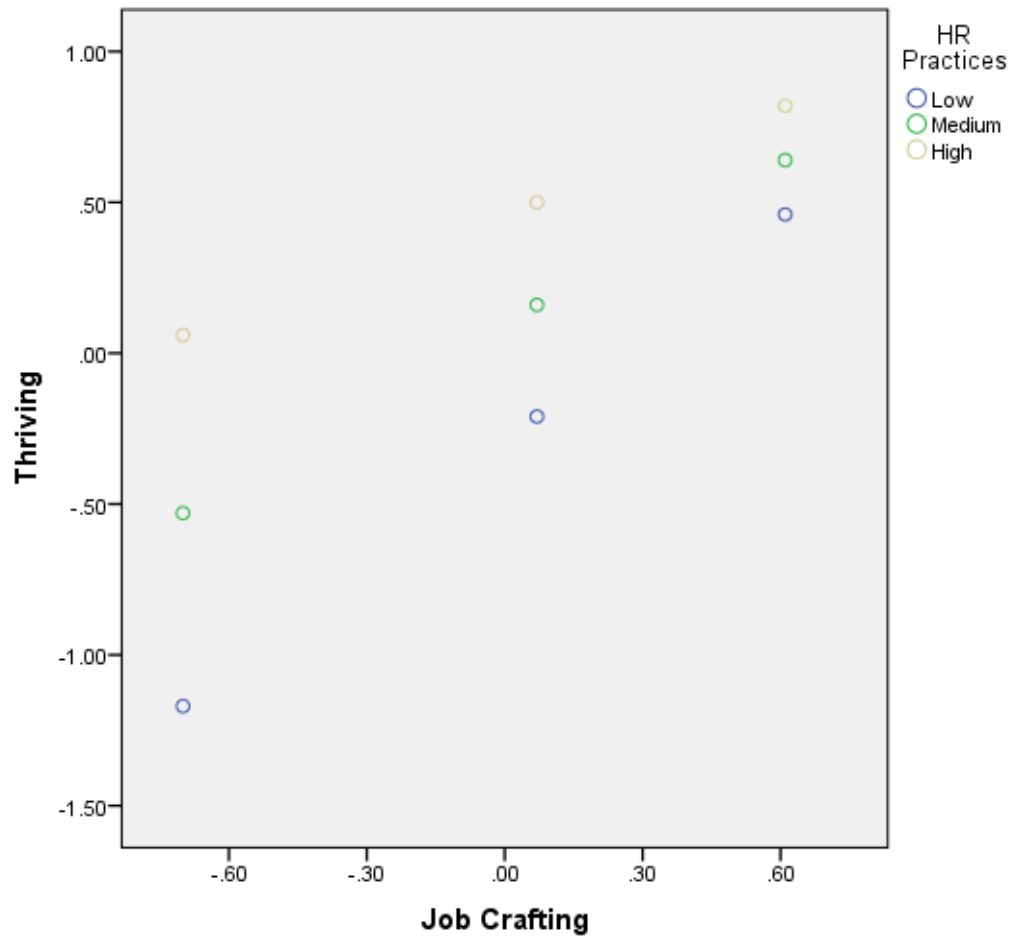
Figure 2. Interaction between job crafting and HR practices

As shown in Figure 2, the results matched the predicted pattern: The job crafting-thriving linkage exists in the low HR practices condition (simple slope = 1.24, $p < .01$ [1/05, 1.44]), but was not lower in the high HR practices condition (simple slope = .58, $p > .01$ [.38, .78]). Thus, Hypothesis 3 was supported. Specifically, when high-performance HR practices are perceived to be good, academics who measure low on job crafting thrive more than those who measure low. However, when the scores on high-performance HR practices are low, academics' thriving increase when job crafting increases.

Discussion

This aimed to test a structural model that distinguishes the nature of relationships between job crafting, high-performance HR practices and thriving. Results confirmed the two-factor structure of thriving (vitality and learning), a three-factor structure of job crafting, and a seven-structure of high-performance HR practices. The findings support a model in which job crafting and high-performance HR practices interact to effect thriving of academics in higher education institutions.

As hypothesised, job crafting positively predicted thriving at work. The more academics practised cognitive, task and relational job crafting, the more they experienced vitality and learning in their jobs. According to Spreitzer and Porath (2012), individuals could affect their thriving through specific actions. First, crafting jobs could result in meaningful work, which impacts vitality and learning, confirming the significant role of individual thriving at work. Second, by looking for opportunities to innovate, academics gain knowledge that could fuel thriving. Third, by investing in relationships that energise, academics experience higher vitality and learning.

The results showed that job crafting was a stronger predictor of thriving than high-performance HR practices. However, high-performance HR practices such as recruitment and selection, training and development, promotion, job security, performance-related pay, communication, and autonomy (Iverson & Zatzick, 2007; McClean & Collins, 2011; Price, 2011) play an essential supporting role in thriving at work.

Findings from the present study confirmed that employee perceptions of high-performance HR practices have a direct impact on the extent to which academics thrive. Academics who perceive high-performance HR practices experience higher levels of thriving (i.e. vitality and learning). Communication, promotion, and selection had the strongest associations with thriving. Furthermore, the results showed that high-performance HR practices play a significant and to enable academics to thrive, even when they are not crafting their jobs. If high performance HR practices are poor, academics will thrive when they are crafting their jobs. Therefore, high performance HR practices are critical to enable academics to thrive, rather than only survive.

What practices can higher education institutions implement to promote the thriving of academics? According to Spreitzer and Porath (2012), sharing of information, providing decision-making discretion, minimising incivility and offering performance feedback lead to the thriving of people at work. Understanding the mission and strategy of their institutions is vital to promote feelings of competence, which increase vitality and growth. Providing decision-making discretion acknowledges the autonomy of academics, which fuels their vitality and growth. High-performance HR practices which minimise incivility in the institution build experiences of vitality and learning. Feedback creates opportunities for learning.

Three types of job crafting, namely cognitive crafting, task crafting, and relational crafting, are relevant for academics (Wellman & Spreitzer, 2011). Academics could craft their jobs cognitively by enlarging their perspectives and by leveraging more of their best selves. Enlarging their perspectives could be done by appreciating different ways in which in which their work can impact others, e.g. through the advancement of knowledge, integrating disciplines and paradigms, applying their knowledge to solve societal problems, and by extending and transforming the knowledge of students. Task crafting can be attained by focussing on meaningful research questions and by crafting more challenges into their jobs by developing new teaching modules. Relational crafting entails changing the quality and amount of interactions with others at work through building high-quality connections and by increasing their contact with beneficiaries of their work (e.g. students, parents, and community members).

It is suggested that employees perceive high-performance HR practices in a positive light to promote thriving even if job crafting is done by academics. Human resource management professionals within higher education need to develop an integrated set of high-performance HR practices and ensure they are consistently and fairly implemented. Hence higher the opportunity for job crafting the better the opportunity to thrive but if the perceived high-performance HR practices are seen as fair and just it will give the opportunity for academics to thrive even if there is not much of an opportunity to job craft. Ideally, if academics can job craft and high-performance HR practices can support academics to job craft, the higher education environment has thriving academics.

Recommendations

What practices can higher education institutions implement to promote the thriving of academics? According to Spreitzer and Porath (2012), sharing of information, providing decision-making discretion, minimising incivility and offering performance feedback lead to the thriving of people at work. Understanding the mission and strategy of their institutions is vital to promote feelings of competence, which increase vitality and growth. Providing decision-making discretion acknowledges the autonomy of academics, which fuels their vitality and growth. High-performance HR practices which minimise incivility in the institution build experiences of vitality and learning. Feedback creates opportunities for learning.

Three types of job crafting, namely cognitive crafting, task crafting, and relational crafting, are relevant for academics (Wellman & Spreitzer, 2011). Academics could craft their jobs cognitively by enlarging their perspectives and by leveraging more of their best selves. Enlarging their perspectives could be done by appreciating different ways in which their work can impact others, e.g. through the advancement of knowledge, integrating disciplines and paradigms, applying their knowledge to solve societal problems, and by extending and transforming the knowledge of students. Task crafting can be attained by focussing on meaningful research questions and by crafting more challenges into their jobs by developing new teaching modules. Relational crafting entails changing the quality and amount of interactions with others at work through building high-quality connections and by increasing their contact with beneficiaries of their work (e.g. students, parents, and community members).

It is suggested that employees perceive high-performance HR practices in a positive light to promote thriving even if job crafting is done by academics. Human resource management professionals within higher education need to develop an integrated set of high-performance HR practices and ensure they are dependable and justly implemented. Hence higher the opportunity for job crafting the better the opportunity to thrive but if the perceived high-performance HR practices are seen as fair and just it will give the opportunity for academics to thrive even if there is not much of an opportunity to job craft. Ideally, if academics can job craft and high-performance HR practices can support academics to job craft, the higher education environment has thriving academics.

Limitations and Suggestions for Future Research

Interpretations drawn from this study should be take into account as well as its limitations. For example, one of the limitations derives from the use of single time-point, self-report measures. The nature of this study design also meant that it was unable to assess whether employees appear to other observers to be thriving at work and whether their job crafting ratings carry through to influence their job crafting at work. Also, it was not possible to provide insight into the direction of existing effects among job crafting, high-performance HR practices, and thriving. Obtaining observer reports of thriving and workplace behaviours would benefit future research. Furthermore, longitudinal designs will allow greater insight into reciprocal influences over time.

Conclusion

This study contributes to understanding the theoretical framework of the concept of "thriving at work" by examining its relationships with its antecedents. Job crafting and high-performance HR practices are linked to thriving in higher education institutions. Characteristically, academics who craft their jobs are more likely to thrive in their work, as are those who experience high-performance HR practices. Moreover, an interaction between job crafting and high-performance HR practices contributes to the explanation of thriving and emphasises the significance of high-performance HR practices, particularly for people who are not crafting their jobs. High-performance HR practices may provide an essential route to thriving and may compensate for academics' inability to craft their jobs.

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CHAPTER 3

ARTICLE 2

Strengths use and deficit correction, thriving, and performance of academics at universities of technology

Abstract

This study aimed to investigate the relationships among strengths use and deficit correction, thriving at work, and performance of academics. Furthermore, it aimed to investigate whether performance-related pay moderates the effects of thriving on performance. The design used was a cross-sectional survey, with a convinience sample of 276 academic employees from three universities of technology in South Africa. The participants completed the Strengths Use and Deficit Correction Scale, the Thriving at Work Scale, a scale that measured perceptions of performance-related pay, and measures of task and contextual performance. The results showed that perceived organisational support for strengths use, as well as individual strengths use and deficit correction, predicted thriving at work. Thriving predicted task and contextual performance. A significant interaction was found between thriving and performance-related pay. When performance-related pay was perceived to be poor, thriving employees (compared with those who measured low on thriving) did not report substantially better performance. However, when performance-related pay was perceived to be good, there were substantial differences between the performance of thriving and non-thriving employees. The most robust relation between thriving and performance existed when performance-related pay was perceived to be good.

Key terms: Strengths use, deficit correction, well-being, academics, thriving, performance, contextual performance, task performance, thriving.

Individuals have an inherent drive for self-improvement and growth (Ryan & Deci, 2017). This drive can expose people to situational demands that might overwhelm them so that they either struggle and give in or survive. Alternatively, they might thrive (Brown, Arnold, Fletcher, & Standage, 2017). In a quest to understand how individuals achieve fulfilment, it is necessary to study why some people thrive in certain situations, whereas others merely survive or give in. Seligman and Csikszentmihalyi (2000, p. 13) predicted that in the 21st Century, "a psychology of positive human functioning will arise that achieves a scientific understanding and effective interventions to build thriving in individuals, families, and communities."

Individual strengths have been associated with positive human functioning (Seligman, 2011), and positive affect (Littman-Ovadia, Lavy, & Boiman-Meshita, 2017). Recent studies (e.g., Littman-Ovadia & Lavy 2016; Littman-Ovadia & Steger 2010) have also linked strengths with positive experiences at the workplace. However, measuring the extent to which individuals use their strengths, thus fulfilling their capacity at work is essential, beyond the simple identification of these strengths. Studies suggest that the mechanisms underlying the effects of strengths use are different from those underlying the personal effects of strengths endorsement (Lavy & Littman-Ovadia, 2016; Littman-Ovadia & Lavy, 2016).

A comprehensive understanding of human strengths and deficits, as well as perceived organisation support for strengths use (POSSU), and deficit correction (POSDC) is needed to make informed decisions on how to support employees to achieve their full potential. The deficit-based approach (DBA) is valuable for purposes of individual and organisational development. However, the strengths-based approach (SBA) focus on the strengths and potential of individuals and organisations (Linley, Joseph, Harrington, & Wood, 2006; Seligman & Csikszentmihalyi, 2000). The SBA makes it possible to study and develop the talents and virtues of people (Buckingham & Clifton, 2001). Researchers (Bouskila-Yam & Kluger, 2011; Longenecker, 2010; Sienstra, 2010) suggest that the SBA, performance, engagement and well-being are positively related (Harzer & Ruch, 2013; Keenan & Mostert, 2013; Mphahlele, Els, De Beer, & Mostert, 2018). However, increased performance can also result from DBA (Abdullah, Ahsan, & Alam, 2009). Therefore, focussing on both strengths use and deficit correction may be beneficial for an organisation (Els, Mostert, & Van Woerkom, 2018).

According to organisational support theory (Eisenberger, Fasolo, & Davis-LaMastro, 1990; Rhoades & Eisenberger, 2002), employees form a broad idea concerning the extent to which the organisation appreciates their contribution and is bothered about their well-being. Such positive organisational support (POS) is associated with greater psychological well-being, more optimistic inclination towards the organisation, and behavioural outcomes helpful to the organisation (Allen, Shore, & Griffeth, 2003; Rhoades & Eisenberger, 2002). According to Van Woerkom et al. (2016), individuals depend on organisations to support them to develop and use their strengths and to improve their deficits. Furthermore, Van Woerkom et al. (2016) compared the effects of a focus on strengths use and deficit correction by questioning which of these approaches (or combination thereof) lead to the most favourable outcomes. The results of other studies (e.g., Botha & Mostert, 2014; Mostert, Theron, & De Beer, 2017; Mphahlele et al., 2018) showed that POS for both strengths use and deficit correction predicted work engagement and learning.

No studies were found regarding the relationships among a balanced strengths-and-deficit-based approach, thriving at work, and performance in the South African higher education context. Drawing on the work done by Van Woerkom et al. (2016) and others, an investigation is necessary to determine the extent to which POS for strengths use and for deficit correction, as well as strengths use behaviour (SUB) and deficit correction behaviour (DCB), contribute to thriving at work and better performance, among academics. Furthermore, performance-related pay might moderate the effect of thriving on performance. More specifically, thriving might be stronger related to performance when performance-related pay is perceived. The thriving-performance relation might be weaker when performance-related pay is regarded as poor. However, it is not clear whether performance-related pay will interact with thriving at work to affect the performance of academics.

Thriving

The concept of thriving at work has recently received pronounced attention in positive organisational scholarship (Paterson, Luthans, & Jeung, 2014; Spreitzer & Porath, 2012). Thriving is characterised by the united experience of learning and vitality (Spreitzer & Sutcliffe, 2007; Spreitzer, Sutcliffe, Dutton, Sonenshein, & Grant, 2005) and is considered dissimilar from subjective well-being and work engagement (Carmeli & Spreitzer, 2009; Spreitzer et al., 2005; Spreitzer, Lam, & Fritz, 2010).

Subjective well-being captures the hedonic dimension of well-being, while thriving incorporates both hedonic and eudaimonic dimensions. Thriving at work and work engagement (Bakker, Schaufeli, Leiter, & Taris, 2008) do intersect to a degree. In both models, available energy (termed vitality or vigour) is the main component. However, work engagement does not require experiences of learning, as it is more concentrated around experiences of dedication and absorption (Spreitzer et al., 2010).

Perceived Organisational Support for Strengths Use and Deficit Correction

Organisational climate is an important contextual element identified by various researchers as leading to different behavioural outcomes (Yuan & Woodman, 2010). Van Woerkom et al. (2016) derived the concepts of POS for strengths use and deficit correction on the foundation of the organisational support theory. POS is a strategic sign of employee perception of how their organisation treats them (Zagenczyk, Scott, Gibney, Murrel, & Thatcher, 2010) and is defined as "employees" general belief that their organisation values their contribution and cares about their well-being" (Rhoades & Eisenberger, 2002, p. 699). If employees perceive that their organisation supports and looks after their well-being, it might increase their interest in their work (Rhoades & Eisenberger, 2002) and enhance the sense of aliveness in the workplace, promoting the learning of latest things to reciprocate and add to the growth of organisations.

Thriving at work is a psychological state, generally the internal belonging of an employee (Spreitzer et al., 2005). When employees experience thriving at work, they feel the drive to work, which increases both their short-term working and longer-term development and, hence, their performance (Porath, Spreitzer, Gibson, & Garnett, 2012). According to Zagenczyk et al. (2010), perceived organisational support is a strategic sign of employee perception of how their organisation treats them. Wiesenfeld, Raghuram, and Garud (2001) argue that support from organisations increases the workers' feelings of being respected and appreciated, which again enhance motivation for learning new things and give a sense of feeling energised. Thus, a supportive environment should enhance thriving at work. POS for strengths use is describe as the extent to which employees believe and notice that their organisations encourage the use and application of their strengths in the workplace (Van Woerkom et al., 2016). As mentioned previously, evidence suggests that POS for strengths use is a significant predictor of work-related aspects such as engagement (Stander & Mostert, 2013) and job performance (Van Woerkom & Meyers, 2015).

The deficit-based approach (DBA) has aided persistently in addressing shortcomings of individuals and organisations to attain goals and facilitate growth. Training and development departments of organisations have long been approved to design and convene interventions to resolve areas of development identified in the organisation as a means of warranting higher levels of performance and growth (Clifton & Harter, 2003; Linley & Harrington, 2006a, 2006b). However, these are also linked to negativity, including the likelihood of draining the energy levels of employees and leading to negative feelings resembling anxiety and frustration (Page & Vella-Broderick, 2008). Furthermore, only concentrating on weaknesses could thwart employees from adding value and hinder their performance and sense of well-being (Roberts et al., 2005).

As far as deficit correction is concerned, employees also count on the backing from organisations to enhance and develop correction of their deficits. POS for deficit correction is defined as the extent to which individuals believe that organisations that employ them support them to improve their deficits or weaknesses in the workplace (Van Woerkom et al., 2016). Another positive organisational outcome linked to deficit improvement is organisational commitment (Bartlett, 2001).

Employees' Proactive Behaviour towards Strengths Use and Deficit Correction

The concept of individual strengths refers to specific individual characteristics, abilities, and traits that, when actualised, energise a person and permit performance at his or her personal best (Linley & Harrington, 2006a, 2006b). Although strengths are trait-like (Peterson & Seligman, 2004), the way strengths are applied is dependent on values, interests, context and other strengths (Biswas-Diener, Kashdan, & Minhas, 2011). Research has indicated that when employees know, develop, and utilise their strengths, it leads to positive psychological and behavioural outcomes (Biswas-Diener et al., 2011). Some studies focused on the relationship between strengths use and well-being (Govindji & Linley, 2007; Wood, Linley, Maltby, Kashdan, & Hurling, 2011). They did, however, measure individual strengths use and well-being in very general terms, pertinent to a variety of settings and not explicitly in the workplace. Whenever employees take it upon themselves to improve their work situation or when they craft better conditions on their own, it is observed that this is a result of proactive behaviour rather than passively adapting to circumstances (Crant, 2000).

Individual deficits are ways of feeling, thinking or behaving that do not necessarily come intuitively to an individual nor do they automatically enjoy doing, but in which the person can become proficient if these deficits are developed in such a way that they are improved (Meyers, Van Woerkom, De Reuver, Bakker, & Oberski, 2015). During performance management, supervisors or managers assess individuals' performance and provide feedback so that they could optimise their performance, which requires attention to deficit correction (Torrente, Salanova, Llorens, & Schaufeli, 2012). Research shows that when employees' are proactive towards deficit correction, they tend to learn continuously (Rowold & Schilling, 2006).

Strengths use, Thriving, Performance and Performance-related Pay

Individuals' performance at work reflects their level of functioning (Sarkar & Fletcher, 2014). Two of the aspects of performance used by Bakker and Demerouti (2008), namely, task performance and contextual performance, are often investigated. Task performance is "performance on required duties and responsibilities" (Sparrowe, Liden, Wayne, & Kraimer, 2001, p. 320) as an integral part of one's job assignments. It contributes directly to the technical core of the organisation. Contextual performance can be defined as "individual behaviour that is discretionary, not directly or explicitly recognised by the formal reward system, and in the aggregate promotes the efficient and effective functioning of the organisation" (Organ, 1988, p. 4). It is interchangeable with organisational citizenship behaviour (OCB) (Mackenzie, Podsakoff, & Ahearne, 1998) and contributes less directly to the organisation (Motowidlo, Borman, & Schmit, 1997). Instead, it promotes a social and psychological environment that contributes to the accomplishment of tasks (Borman & Motowidlo, 1997; Goodman & Svyantek, 1999). POS influences some vital employee attitudes and behaviours such as organisational citizenship behaviour, among other attitudinal variables (Wayne, Shore, Boomer, & Tetrick, 2002). These employee attitudes and reactions, in turn, are said to influence employee performance.

An employee's relationship with an organisation is based on the exchange of performance and positive work behaviour for positive outcomes at work. Since Van Woerkom et al. (2016) based the concepts of POS for strengths use and for deficit correction on the foundation of the organisational support theory, the researcher proposes that POS for strengths use and for deficit correction is a contributor to thriving in the workplace and performance.

Employees who feel that their organisation supports and cares about their well-being and values their contributions are likely to work harder. Similarly, employees who feel that their organisation cares about their well-being will reciprocate and care about the success of the organisation (Rhoades & Eisenberger, 2002). Supportive organisations boost employees' feelings of being respected and appreciated, which, in turn, stimulate the employees to acquire knowledge and skills and to absorb them with feelings of vitality and learning in the workplace (Mushtaq, Abid, Sarwar, & Ahmed, 2017).

According to Littman-Ovadia et al. (2017), strengths use by employees leads to positive affect, which in turn, leads to positive functioning and attitudes (e.g., Fredrickson, 2001). Initial evidence supports the role of positive affect in mediating the positive effects of a strengths-based climate on well-being (Van Woerkom & Meyers, 2015). Bakker and Van Woerkom (2018) argued that employees can act in agreement with their authentic selves when they use their strengths (Peterson & Seligman, 2004), which results in lower stress and depression because of work (Kernis & Goldman, 2006; Sheldon & Elliot, 1999). Moreover, employees who use their strengths experience mastery (Bandura, 1997), which lead to better performance.

The process of measuring and successively managing organisational and employee performance to improve organisational effectiveness is seen as critical to the development and survival of the organisation (Den Hartog, Boselie, & Paauwe, 2004). Performance-related pay can be described as an individual-based incentive assessment of individual employees' labour effort in relation to their attainment of organisational goals (Pendleton, Whitfield, & Bryson, 2009). Managers can support employee thriving by linking rewards to performance. Performance-related pay will provide employees with a feeling of being rewarded and that their employer values them and their contribution. This is more likely to increase employees' commitment to the organisation and encourage them to contribute more (McClean & Collins, 2011). Unfortunately, performance management in an academic environment is convoluted and delicate (Rabovsky, 2014; Sousa, de Nijs, & Hendriks, 2010) with several inputs, outputs and outcomes, which are often unclear. Nonetheless, Nawaz and Muazzam (2015) report that performance-related pay systems have improved job satisfaction and performance of academics.

Aims and Hypotheses

This study implies that POS for strengths use and employees' proactive behaviour towards strengths use and deficit correction can influence thriving at work and that strengths use and deficit correction can have an impact on performance via thriving. Performance-related pay might interact with thriving in influencing employees' performance. The following hypotheses were formulated.

POSSU (*hypothesis 1a*) and POSDC (*hypothesis 1b*) predict thriving at work. SUB (*hypothesis 2a*) and DCB (*hypothesis 2b*) predict thriving at work. Thriving predicts performance (*hypothesis 3*). Thriving mediates the relationships between POSSU, POSDC, SUB and DCB on the one hand and performance on the other hand (*hypothesis 4*). Performance-related pay moderates the relation between thriving at work and performance (*hypothesis 5*).

Research Design

A descriptive, cross-sectional, and quantitative approach was used to gather data through the utilisation of questionnaires. A cross-sectional method allows the researcher to survey various groups of individuals at a single point in time (Salkind, 2009).

Participants

A total of 276 employees were recruited from the Vaal University of Technology ($n = 118$), the Tshwane University of Technology ($n = 109$), and the Central University of Technology ($n = 49$). Participants' ages ranged from 20 years to 79 years. The mean age of participants was 43.83 ($SD = 11.10$). Almost half of the respondents ($n = 128$) held a master's degree, while most respondents (81.6%) had served in an academic profession for more than five years. Most participants (80.4%) were permanently employed, and the most abundant group comprised of lecturers (50.2%). The biographical and employee-related characteristics of the participants are described in Table 1.

Table 1

Characteristics of the Participants (n = 276)

Item	Category	Frequency	Percentage
Gender	Male	123	44.6
	Female	153	55.4
Age	20 to 30 years	38	13.7
	31 to 40 years	73	26.4
	41 to 50 years	87	31.5
	51 to 60 years	58	21.0
	Over 60	20	7.2
Home language	Afrikaans	109	39.5
	English	66	23.9
	African language	101	36.6
Highest qualification	Diploma	7	2.5
	Postgraduate diploma	7	2.5
	Degree	20	7.2
	Honours degree	31	11.2
	Master's degree	128	46.4
	Doctoral degree	83	30.1
Position	Junior lecturer	35	12.7
	Lecturer	138	50.2
	Senior lecturer	56	20.4
Tenure	Less than five years	51	18.4
	Five to 10 years	70	25.3
	11 to 15 years	46	16.6
	16 to 20 years	42	15.1
	21 to 25 years	31	11.2
	More than 25 years	36	13.1

Instruments

The following instruments were used in the empirical study:

Perceived organisational support for strengths use, deficit correction behaviour, strengths used and perceived organisational support for deficit correction were measured with the *Strengths Use and Deficit Correction Scale* (SUDCO) (Van Woerkom et al., 2016). The SUDCO consists of 30 items scored on a seven-point scale ranging from 0 (*almost never*) to 6 (*almost always*) and comprised of four dimensions, namely, POSSU, DCB, SUB, and POSDC. POSSU is measured by eight items (for example, "This organisation gives me the opportunity to do what I am good at"). DCB is measured by seven items (for example, "At work, I focus on developing the things I struggle with"). SUB is measured by seven items (for example, "I capitalise on my strengths at work"), and POSDC is measured by eight items (for example, "In this organisation, I receive training to improve my weak points"). Van Woerkom et al. (2016) found acceptable Cronbach's alpha values for the scales: POSSU: α = .95; DCB: α = .89; SUB: α = .90; and POSDC: α = .90.

The *Thriving at Work Scale* (TWS) (Porath et al., 2012) was used to measure the level of thriving. It is a 10-item scale measuring two dimensions: learning (for example, "I continue to learn more and more as time goes by") and vitality ("I feel alive and vital"). Each subscale consists of five items. A Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree)* is used to rate the 10 items. The alpha coefficient of the total scale was found to be .93.

A scale from Goodman and Svyantek (1999) was adapted to measure job performance for task performance. This scale has nine items, but only six items were used, scored on a Likert-type scale ranging from 1 (*low*) to 10 (*high*). Respondents had to rate their perceptions regarding their job performance. Encompassing a single dimension, sample items of the scale include the following: "I fulfil all the requirements of my job" and "I perform well in the overall job by carrying out tasks as expected". Goodman and Svyantek (1999) reported an internal reliability of .90 for the scale.

Contextual performance was measured using the adapted *Organisational Citizenship Behaviour Scale* (OCBS) (Rothmann & Rothmann, 2010). The OCBS consists of six items scored on a Likert-type scale varying from 1 (*low*) to 10 *(high)*.

Three items measure assistance to co-workers in the organisation. The other three measure assistance to the organisation. An example item of assistance to co-workers is "I give up time to help co-workers who have work or non-work problems". An example item of assistance to the organisation is "I take action to protect the organisation from potential problems". The Cronbach alpha coefficients for the two scales were found to be .78 (assistance to co-workers) and .80 (assistance to the organisation).

A section of the *High-Performance HR Practices Questionnaire* (HPHRP) (Mostafa & Gould-Williams, 2014) was used to measure employee perceptions of the high-performance HR practice of performance-related pay. The section consists of four items (for example, "I have the opportunity to earn individual bonuses for my performance"). All items are rated according to an agreement-disagreement Likert format varying from 1 (*strongly disagree*) to 7 (*strongly agree*).

Data Analysis

Statistical analyses were performed using two statistical programs, namely, Mplus Version 8 (Muthén & Muthén, 1998/2017) and the SPSS 24 program (IBM Corporation, 2016). Mplus was used to conduct confirmatory factor analyses. The SPSS 24 program (IBM Corporation, 2016) was used to compute descriptive statistics. Maximum likelihood estimation with robust standard errors (MLR) in Mplus was used as an estimator. The following indices were used to assess model fit for measurement and structural models (West, Taylor, & Wu, 2012): a) absolute fit indices, including the chi-square statistic, standardised root mean residual (SRMR), and root mean square error of approximation (RMSEA). RMSEA and SRMR values lower than .08 indicate a close fit between the model and the data. b) incremental fit indices, including the Tucker-Lewis index (TLI) and comparative fit index (CFI). The recommended value for TLI and CFI is .90 or higher.

An estimate of scale reliability (ρ) was obtained for each scale (Raykov, 2009). The statistical significance was set at $p < .01$. The practical significance of correlations and percentages of variance explained were assessed by using the guidelines of Cohen (1988). A correlation of .5 is large, .3 is moderate, and .1 is small.

Cohen (1988) provides the following guidelines concerning the practical significance of R^2: .25 – large effect;.9 – medium effect,.9 – small effect. The indirect effects of strengths use on performance (via thriving) were computed using the using the procedure explained by Hayes (2018).

A moderation model with the effect of thriving on performance moderated by performance-related pay was estimated using PROCESS Version 3 (Hayes, 2018) in SPSS 24 (IBM Corporation, 2016). The independent variable and the moderator were not centred, given that factor scores were used in the analysis.

Research Procedure

Universities of technology in the Free State and Gauteng which were included in the study were approached. Their management gave approval and provided ethical clearance to conduct the study. Ethical clearance was also obtained from the Ethics Committee at the university from which the research was undertaken. An electronic questionnaire in English via the myresearchsurvey.com platform was circulated using email to only academic staff. The questionnaire took approximately 30 to 45 minutes to complete. A cover letter clarified the purpose of the study and emphasised the anonymity and confidentiality of the research project. Since partaking in the project was voluntary, the participants had the choice to withdraw at any time. Participants completed the online questionnaire from the middle of February to mid-September 2017. Responses to the items were illustrated in an Excel spreadsheet, after which the spreadsheet was changed to an SPSS dataset for analysis.

Results

Testing the Measurement Model

Based on the results of previous studies (Stander & Mostert, 2013; Van Woerkom et al., 2016) regarding the factor structures of the measures included in this study, it was decided to test one measurement model. The model consisted of three latent variables: strengths use and deficit improvement, thriving, and performance. Strengths use and deficit improvement consisted of four first-order latent variables: perceived organisational support for strengths use (measured by seven items), deficit correction behaviour (measured by seven items), individual strengths

use behaviour (measured by eight items), and perceived organisational support for deficit correction (measured by eight items).

Thriving consisted of two first-order latent variables: vitality (measured by five items) and learning (measured by five items). Performance consisted of two first-order latent variables: task (measured by six items) and contextual (measured by seven items). All the latent variables in Model 1 were allowed to correlate.

The final measurement model showed acceptable fit to the data (χ^2 = 1889.21, df = 1105; $p <$ .001; CFI = .91; TLI = .91; RMSEA = .05, p = .38 [.047, .055]; SRMR = .06). Items all loaded on their respective constructs as expected. The standardised regression coefficients were all statistically significant ($p <$ .001).

Descriptive Statistics and Product-Moment Correlations

The descriptive statistics and reliability coefficients of the measuring instruments, as well as the product-moment correlation coefficients between the constructs, are reported in Table 2.

Frequency analyses showed that approximately 11% of the participants did not thrive at all. However, regarding the dimensions of thriving, 22% lacked energy and did not look forward to each day. Furthermore, 10% reported that they were not learning and improving. A total of 42% of the sample endorsed the "agree" and "strongly agree" responses on the vitality dimension, while 57% endorsed these responses on the learning dimension. Table 2 shows that the reliabilities of all the measuring instruments were acceptable, ranging from .81 to .96 (Nunnally & Bernstein, 1994). Both dimensions of thriving (learning and vitality) were practically and statistically significantly related to the four dimensions of SUDCO (POSSU, SUB, DCB, and POSDC), with medium effects. Furthermore, both dimensions of thriving (learning and vitality) were practically and statistically significantly related to task and contextual performance, with a small effect.

Table 2

Descriptive Statistics, Reliability Coefficients, and Correlations of the Scales (n = 276)

Variable	ρ	Mean	SD	1	2	3	4	5	6	7
13. Vitality	.95	5.37	1.33	-	-	-	-	-	-	-
14. Learning	.91	5.93	.93	.69	-	-	-	-	-	-
15. POSSU	.96	4.06	1.23	.43	.48	-	-	-	-	-
16. DCB	.84	4.50	.73	.44	.48	.35	-	-	-	-
17. SUB	.91	4.85	.75	.44	.35	.44	.43	-	-	-
18. POSDC	.93	3.75	1.17	.34	.49	.56	.34	.30	-	-
19. Task performance	.87	3.07	1.70	.19	.21	.13	.13	.14	.11	-
20. Contextual performance	.81	8.41	1.10	.17	.19	.12	.12	.12	.09	.51

Note: All correlations are statistically significant at the .01 level (two-tailed)

Testing the Structural Model

The final measurement model showed acceptable fit to the data (χ^2 = 2164.56, *df* = 1303; *p* < .001; CFI = .91; TLI = .91; RMSEA = .05, *p* = .68 [.045, .053]; SRMR = .07). Items all loaded on their respective constructs as expected. The standardised regression coefficients were all statistically significant (*p* < .001).

Table 3 shows the standardised regression coefficients for when thriving and performance were considered as dependent variables.

Table 3

Standardised Regression Coefficients

Variable	Estimate	SE	Est/SE	*p*
Thriving ON				
POSSU	.30	.09	3.38	.001**
DCB	.25	.13	2.10	.050*
SUB	.25	.12	2.18	.030*
POSDC	.09	.08	1.21	.227
Performance ON				
Thriving	.32	.09	3.44	.001**

Note: SE: standard error; Est/SE: estimate divided by standard error; *p*: obtained significance value.

* *p* < .05; ** *p* < .01.

Table 3 shows that thriving at work is best predicted by three variables, namely, POSSU (β = .30, *p* < .01), DCB (β = .25, *p* < .05), and SUB (β = .25, *p* < .05). Hypotheses 1a, 2a, and 2b are accepted. Strengths use and deficit correction by the organisation and the individual predicted 48.5% of the variance in thriving. Thriving at work predicted performance (β = .32, *p* < .01). Hypothesis 3 is accepted. Thriving predicted 10.1% of the variance in performance. The independent variables (strengths use and deficit correction) explained 48% (large effect, Cohen, 1988) of the variance in thriving. Thriving explained 10% (medium effect, Cohen, 1988) of the variance in performance.

β = .30**
β = .25*
β = .25*
β = .09
β = .32**
β = .76**
β = .67**

POSSU
DCB
SUB
POSDC
Thriving
$R^2 = .48$
Performance
$R^2 = .10$
Task Performance
Contextual Performance
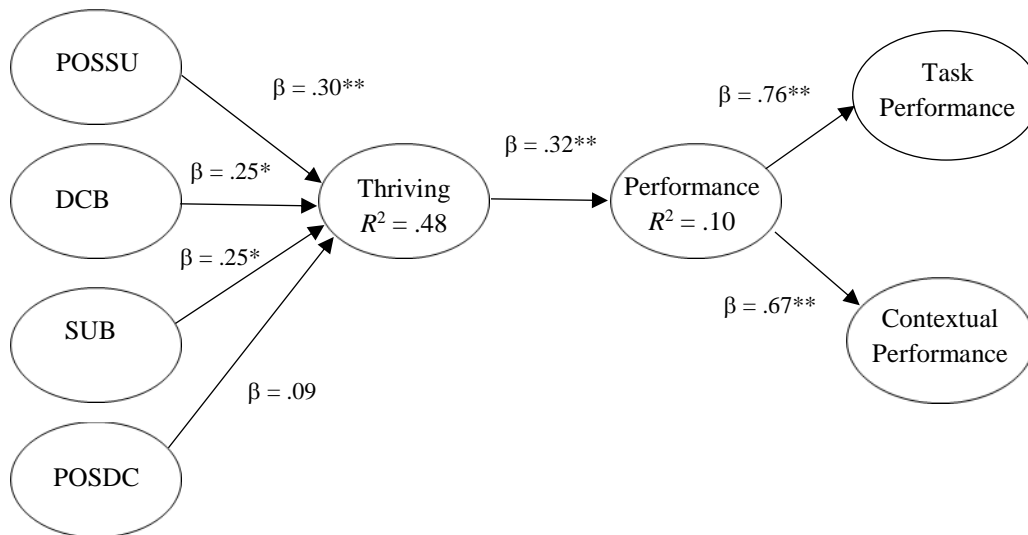
* $p < .05$; ** $p < .01$

Figure 1. A structural model of thriving and performance

Indirect Effects

The procedure suggested by Hayes (2018) was followed to investigate the indirect effects of strengths use and deficit correction on thriving at work. Bootstrapping (with 10 000 samples) was used to construct two-sided bias-corrected 95% confidence intervals (CIs) to evaluate the indirect effects.

The results showed that POSSU ($p < .02$, [.03, .19]), DCB ($p = .08$, [.01, .22]) and SUB ($p = .08$, [.01, .21]) indirectly affected task and contextual performance via thriving. However, the indirect effect of POSDC on task and contextual performance via thriving included zero ($p = .24$, [-.01, .11]). Hypothesis 4 is partially accepted.

Moderating Effects

Hierarchical regression analyses were performed to examine the extent to which performance-related pay moderates the influence of performance (task and contextual) on thriving of academics following the procedure suggested by Hayes (2018). With thriving as the dependent variable, standardised scores of performance (predictor) were entered in the first step, followed by standardised performance-related pay scores (moderator) in the second step. To examine the possibility of a significant moderating effect, the interaction between thriving and performance-related pay was entered in the third and final step.

According to Hayes (2018), evidence of a moderator effect is present when the interaction term between the predictor and moderator is significant. Regression results for the moderation effect are presented in Table 4.

Table 4

Regression Results for the Moderation Effect

Variable	Estimate	SE	t	p	LCI	UCI
Constant	-.05	.05	-.98	.33	-.16	.05
Thriving	.35	.06	5.72	.00**	.23	.47
Performance-related pay	-.11	.04	-2.72	.00**	-.19	-.03
Interaction	.14	.04	3.07	.00**	.05	.22

Note: SE: standard error; p: obtained significance value; LCI: Lower confidence interval; UCI: Upper confidence interval; ** $p < .01$.

Table 4 confirms that thriving had a positive effect on performance. However, performance-related pay had a small negative effect on performance. The interaction between thriving and performance-related pay accounted for a significant addition of 3% in the variance of performance ($F(1, 272) = 9.42$, $p < .002$, $\Delta R^2 = .031$). The complete regression model accounted for 11.45% of the variance in performance ($F(3, 272) = 11.72$, $p < .001$). Table 5 shows that the interaction of thriving and performance-related pay is significant ($\beta = .08$, SE = .03, $t = 2.85$, $p < .01$ [.02, .13]). In support of Hypothesis 5, performance-related pay was found to moderate the relationship between thriving and performance significantly. Overall, these results indicate that performance-related pay has a direct influence on performance beyond what can be accounted for by thriving and moderates the relation between thriving and performance.

To examine the interaction effects that emerged, simple slopes were plotted of the performance-related pay-thriving linkage at the 16th, 50th, and 84th percentiles, which corresponded to a standard deviation below the mean, the mean, and a standard deviation above the mean (Hayes, 2018). It was also tested whether each slope was statistically significant.
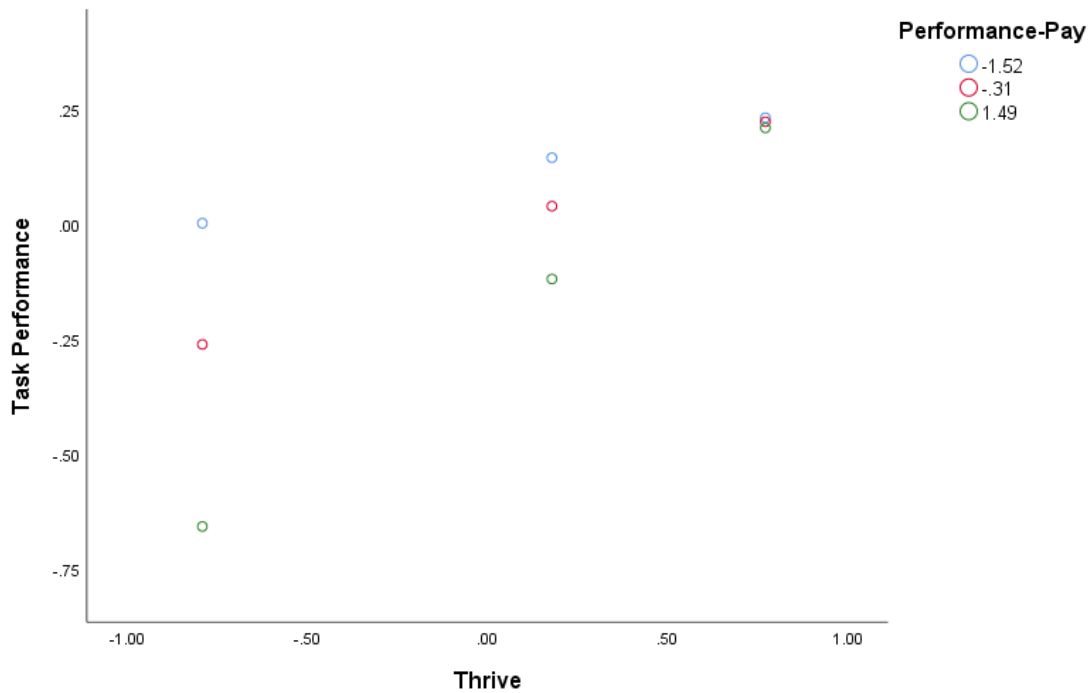
Figure 2. Interaction between thriving and performance-related pay

As shown in Figure 2, the thriving-performance linkage did not exist in the low performance-related pay condition (simple slope = -1.52, $p < .059$ [-.01, .30]), but this linkage was stronger in the moderate (simple slope = -.31, $p < .0001$ [.19, .43]) and high performance-related pay condition (simple slope = 1.49, $p < .0001$ [.35, .76]). Specifically, when performance-related pay was perceived to be high – those individuals with thrived performed much better than those who did not thrive. However, when performance-related pay was perceived to be low – there were small differences between those who thrived and those who did not thrive. Thus, Hypothesis 5 is supported for task performance. No interaction effect was found for contextual performance.

Discussion

This study tested a structural model of perceived organisational support for strengths use, and for deficit correction, individual strengths use and deficit correction, thriving at work, and performance among South African academics. The study also aimed to investigate whether perceived performance-related pay would moderate the relation between thriving and performance. While the results showed that approximately 11% of employees did not thrive at all, it concerns that a lack of energy was evident in 22% of the sample.

It was concerning that 58% of the sample did not show optimal vitality scores, while 43% did not function optimally concerning learning. The results revealed that perceived organisational support for strengths use, as well as individual strengths use and deficit correction, predicted thriving at work. Thriving predicted task and contextual performance.

An analysis of correlations showed that perceived support by the organisation for strengths use and deficit correction for academics were both positively associated with vitality and learning (which are dimensions of thriving at work). The structural model confirmed that perceived organisational support for strengths use had an impact on thriving of employees. Therefore, when these institutions supported the use of talents and strengths during the performance of tasks and academic duties, employees felt the most vitality. Deficit correction behaviour and strengths used by individual academics also contributed to thriving at work. When academics could develop their weak points and improve on their tasks and academic duties, they felt more energised and experienced learning. Together, these three variables (that is, perceived organisational support for strengths use, individual strengths use, and deficit correction) explained a large percentage of the variance in thriving at work.

The results showed that POS for strengths use was the strongest predictor of thriving at work. POS for strengths use refers to employees' beliefs and observations that their institutions encourage the use and application of their strengths in the workplace (Van Woerkom et al., 2016). While previous research has shown that POS for strengths use is a significant predictor of work engagement (Stander & Mostert, 2013), this study confirmed its predictive value for thriving at work. Employees who perceive that their institutions supported their strengths use indeed reported that they experienced energy and learning at work (Spreitzer et al., 2005). Wiesenfeld et al. (2001) argued that support from organisations increases the workers' feelings of being respected and appreciated, might have enhanced their motivation for learning new things and experiencing energy.

However, individual strengths use, and deficit correction also contributed to the thriving of individuals. Previous research confirms that when individuals know, develop, and utilise their strengths, it leads to positive psychological and behavioural outcomes (Biswas-Diener et al., 2011). Individual deficits are ways of behaving, feeling, or thinking that do not necessarily come instinctively to an individual and that the person does not automatically enjoy doing, but

in which the person can become competent if these deficits are developed in such a way that they are improved (Meyers et al., 2015).

Thriving at work predicted task and contextual performance of academics. Previous studies revealed that engaged employees had high task performance (Ho, Wong, & Lee, 2011). The analyses showed that POS for strengths use, as well as strengths use and deficit correction by the individual indirectly affected performance via thriving. Therefore, creating a climate for supporting strengths use in organisations affected academics' thriving and resulting from that their task and contextual performance. The increase in thriving and performance could probably be attributed to the positive effect that individuals experience when they receive positive support for strengths use by their organisations. Furthermore, their proactive behaviour when they use their strengths and correct their deficits (Littman-Ovadia et al., 2017), the authenticity that they experience when they use their strengths (Peterson & Seligman, 2004), and their mastery experiences (Bandura, 1997) probably led to performance.

The results showed that perceived performance-related pay practices interacted with thriving to impact task performance. In fact, performance-related pay had a small negative effect on performance. The moderation analyses showed that if the performance-related pay was perceived to be poor, non-thriving employees believed that they performed relatively well. However, when performance-related pay was seen to be good, thriving employees perceived that they performed well, while non-thriving employees perceived that they performed poorly. Therefore, it seems that perceived performance-related pay practices play a significant role in how thriving impacts employees' perceived performance: Firstly, poor performance-related pay practices may lead to non-thriving employees believing that they are performing well, while they do not perform well. Secondly, thriving employees seem to perform at their best when performance-related pay practices are perceived to be good. The results of this study suggest that good performance-related pay practices might be vital to strengthen the linkage between thriving and performance.

Limitations and Suggestions for Future Research

Various study limitations should be noted. Firstly, as this was a cross-sectional study, it comes with the limitation that statements made about causality do not stand their ground due to the study being solely a snapshot (Singleton & Straits, 2010). Secondly, data on all variables in this study were based on self-reports, and this may lead to common method variance. Lastly, the relatively diminutive sample size can be seen as a limitation. However, a cross-sectional study serves for this research, as the current data and evidence from the literature on which this study was based provide suitable ground to interpret the associations among the variables. Nonetheless, to be able to draw longitudinal conclusions, a suggestion for future research would be to include longitudinal and multi-level studies, in which the effects of this study's variables are measured over a more extended period instead of at one point in time (Pallant, 2010).

Recommendations

Higher education institutions must invest resources to enable academics to thrive at work via the balanced strength-and-deficit-based approach. This approach should be seen as a core development tool for academics to increase employees' thriving at work. Thriving matters for better performance and academics seem to perceive performance-related pay as essential to thrive. Time should be devoted to developing a proper performance-related pay management structure and process by involving all role players to ensure a shared understanding of the rationale, implementation and what performance at different levels appears to be (Seyama & Smith, 2013). Practices such as job design, rewards and evaluations should be re-evaluated and reconstructed to fit in with the strengths-based culture or an optimal mix of strengths and deficits, leading employees to promote learning and vitality at work (Spreitzer et al., 2005).

Other than devoting time to the creation of a well-structured performance-related pay management system, supervisors, human resource practitioners, and other key organisational members should support a strengths-based culture at higher education institutions by providing the necessary resources and integrating this culture into the policies and practices of the organisations (Van Woerkom & Meyers, 2015). Strengths use and support for strengths use are associated with self-starting behaviour, and together, they lead to higher levels of thriving at work.

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CHAPTER 4

ARTICLE 3

Strengths use, training and development, thriving, and intention to leave: The mediating effects of basic psychological need satisfaction

Abstract

This study investigated the relationships among strengths use, training and development, psychological needs satisfaction, thriving, and intention to leave of academics in higher education institutions. A cross-sectional survey design, with a convenience sample of 276 academics from three universities of technology in South Africa was used. The Strengths use Scale, the High-Performance HR Practices Questionnaire, the Basic Psychological Need Satisfaction and Frustration Scale, the Thriving at Work Scale, and the Turnover Intention Scale were administered. Strengths use had direct effects on autonomy, competence, and relatedness satisfaction of employees. Training and development had a direct effect on autonomy satisfaction. Furthermore, autonomy satisfaction, strengths use, and training and development had direct effects on thriving, while low autonomy satisfaction and poor training and development had direct negative effects on intention to leave. Strengths use, as well as staff development, had indirect effects on thriving and intention to leave via autonomy satisfaction.

Key terms: Strengths use, human resource practice, learning, development, training, need satisfaction, thriving, academics, well-being, intention to leave

Introduction

Institutions of higher learning in South Africa have undergone significant changes over the past decades (Bentley, Coates, Dobson, Goedegebuure, & Meek, 2013) resulting in psychological ill-health of staff (Barkhuizen, Rothmann, & Van de Vijver, 2014). The result is a workforce that fails to fulfil its potential (Spreitzer & Hwang, 2019) and has a propensity to quit (Ng'ethe, Iravo, & Namusonge, 2012) posing a significant challenge to higher education institutions. At the same time, employees seek more from their work including self-determination and a sense of meaning (Rothmann, 2013) Individuals desire a job situation that allows them to thrive, rather than merely survive (Spreitzer & Hwang, 2019). Thriving is defined as a desirable subjective experience characterised by a sense of vitality and learning at work (Spreitzer & Porath,2012). Thriving is especially crucial, as vitality and learning are fundamental for academics at higher education institutions (Beltman, Mansfield, & Price, 2011).

Employees experience increased vitality, dedication and satisfaction if they capitalise on their strengths (Harter, Schmidt, & Hayes, 2002; Littman-Ovadia & Steger, 2010). Strengths can be defined as features that allow individuals to perform well or at their personal best (Wood, Linley, Maltby, Kashdan, & Hurling, 2011). Strengths research has predominantly focused on one's possession and knowledge of strengths, with a proportional scarcity of research examining the use of strengths (Harzer & Ruch, 2013, 2014) and of evidence indicating that strengths use, instead than one's knowledge of one's strengths, provides to well-being (Govindji & Linley, 2007).

The mechanisms that intervene between strengths use and favourable psychological and organisational outcomes are still untapped. It is vital to investigate the role of need satisfaction in thriving and intention to leave an institution. Satisfaction of the psychological needs for autonomy, competence, and relatedness (Deci & Ryan, 1985) may be at play. Given the costs of academic attrition (Robison, 2008), research is required regarding that which distinguishes academics who thrive in challenging teaching contexts and the factors that sustain and retain them. No study was found regarding the effects of strengths use and training and development on thriving via psychological need satisfaction. This study addressed these research gaps by building on self-determination theory (SDT) (Deci & Ryan, 1985, 2000) to test a model of strengths use towards thriving at work and intention to leave.

Strengths use

Linley (2008) defines a strength as "a pre-existing capacity for a particular way of behaving, thinking, or feeling that is authentic and energising to the user, and enables optimal functioning, development and performance" (Linley, 2008, p. 9). Positive associations exist between strengths use and beneficial outcomes such as well-being, subjective vitality and self-esteem (Govindji & Linley, 2007; Wood et al., 2011). According to Linley's model (2008), two features of strengths use are authenticity and energy. When people use their strengths, they feel more alive and vigorous. In addition, when employees use their strengths, they encounter a feeling of authenticity, expressed as a feeling of being genuine to oneself and following one's directions and preferences in life. This heightened feeling of authenticity would also be accountable for optimal functioning.

The greatest well-being increase is seen when one learns to use unrealised strengths (Wood et al., 2011). Theoretical perspectives in positive psychology have focused equally on the importance of both possessing and using strengths, but a definite distinction can be made between possessing and using strengths. However, while considerable empirical investigation has tested the consequences for well-being of having strengths, there is insufficient knowledge about the effects of strengths use in an organisational context and whether using strengths leads to beneficial outcomes.

Two cross-sectional surveys have afforded evidence of a positive relationship between strengths use and work engagement (Harzer & Ruch, 2013, 2014). Both studies consider strengths use as a relatively constant individual difference variable, accepting that employees have a general tendency to use their strengths to differing extents. Having the opportunity to apply one's strengths makes people feel effectual, enthusiastic, revitalised and intrinsically motivated (Peterson & Seligman, 2004; Wood et al., 2011). Since thriving is different from work engagement, it is crucial to determine whether individual strengths use will facilitate thriving at work, which should allow academics to feel energetic and experience high levels of psychological functioning.

Training and development

Training and development practices are the formal activities planned by organisations to help employees acquire the necessary skills and knowledge to perform present-day or future jobs (Desimone, Werner, & Harris, 2002). It is fundamental to equip employees with required skills and competencies in today's competitive environment (Tsai & Tai, 2003) to enhance organisational competitiveness and performance. According to Guzzo and Noonan (1994), training and development signal managers' commitment to, and trust in, employees, which may result in improved organisational commitment, engagement (Paul & Anantharaman, 2004), and lower turnover (Ashar, Ghafoor, Munir, & Hafeez, 2013).

Although there are numerous pathways between perceived training and development opportunities and employee outcomes, research on intrinsic motivation suggests that work motivation could be a strategic mediating factor (Dysvik & Kuvaas, 2008). Training and development opportunities allow for autonomy satisfaction by increasing feelings of internal control (Gellatly, Hunter, Currie, & Irving, 2009). Moreover, training and development may fulfil the need for relatedness as it motions employees that they are valued and that the company is prepared to engage in a long-term relationship with them (Suazo, Martinez, & Sandoval, 2009). It also permits for collaboration with other people for example colleagues, coaches and mentors that can fuel relatedness satisfaction (Stone, Deci, & Ryan, 2009). Finally, the need for competence can be supported by acquiring new skills and knowledge (Stone et al., 2009).

Psychological Need Satisfaction

SDT, which is a macro theory of motivation and well-being, proposes that humans are naturally driven to seek personal growth and fulfilment (Deci & Ryan, 2002). SDT theory is comprised of six mini-theories, one of which is basic psychological needs theory (BPNT). BPNT explains three basic psychological needs: the need for autonomy, the need for relatedness, and the need for competence. These needs refer to "innate psychological nutriments that are essential for ongoing psychological growth, integrity and well-being" (Deci & Ryan, 2000, p. 229). This theory posits that the satisfaction of these psychological needs is essential for humans to thrive, and maladjustments occur in contexts where these needs get thwarted (Chen et al., 2015; Vansteenkiste & Ryan, 2013).

The need for autonomy necessitates experiencing choice, feeling like the initiator of one's actions, and acting from interest and integrated values (Deci & Ryan, 2000). This need can be satisfied by being able to make personal choices or by backing externally induced requests (Van den Broeck, Vansteenkiste, De Witte, & Lens, 2008). The need for relatedness refers to "a sense of mutual respect and reliance with others" (Baard, Deci, & Ryan, 2004, p. 2046). Baumeister and Leary (1995) distinguish two main features of the need for relatedness. It requires a person to interact often and effectively with others and to believe that these people care about that persons' well-being. Lastly, the need for competence involves being skilful in one's actions and believing that one can influence essential outcomes (Vansteenkiste et al., 2007).

According to SDT, basic need satisfaction is necessary to generating favourable human resource management outcomes (Baard et al., 2004), and Meyer and Gagné (2008) argued that need satisfaction is a mediator between environmental impacts and autonomous effort in work. Moreover, the vitality and energy involved in engaging in work are enhanced by the satisfaction associated with basic psychological needs for relatedness, competence, and autonomy. Research has shown that intrinsic motivation plays a vital role in determining behaviours that may result in employee engagement and that the satisfaction of basic psychological needs for autonomy, competence, and relatedness is key (Weinstein & Ryan, 2010). Hence, this study proposes that individuals thrive if psychological needs are satisfied.

Aim and Hypotheses

This study aimed to investigate the relationships among strengths use, experiences of staff development, psychological needs satisfaction, thriving, and intention to leave of academics in higher education institutions. The hypothesised model is presented in Figure 1. The following hypotheses were set:

Hypothesis 1: Strengths use is positively associated with autonomy (H1a), competence s (H1b), and relatedness satisfaction (H1c).

Hypothesis 2: Training and development are positively associated with autonomy (H2a), competence (H2b), and relatedness satisfaction (H2c).

Hypothesis 3: Thriving is predicted by autonomy (H3a), competence (H3b), and relatedness satisfaction (H3c).

Hypothesis 4: Strengths use is positively associated with thriving (H4a) and negatively associated with intention to leave (H4b).

Hypothesis 5: Training and development are positively associated with thriving (H5a) and negatively associated with intention to leave (H5b).

Hypothesis 6: Intention to leave is negatively associated with autonomy (H6a), competence (H6b), and relatedness satisfaction (H6c).

Hypothesis 7: Strengths use indirectly affects thriving via autonomy (H7a), competence (H7b) and relatedness satisfaction (H7c).

Hypothesis 8: Training and development indirectly affects thriving via autonomy (H8a), competence (H8b) and relatedness satisfaction (H8c).

Hypothesis 9: Strengths use indirectly affects intention to leave via autonomy (H9a), competence (H9b) and relatedness satisfaction (H9c).

Hypothesis 10: Training and development indirectly negatively affects intention to leave via autonomy (H10a), competence (H10b) and relatedness dissatisfaction (H10c).
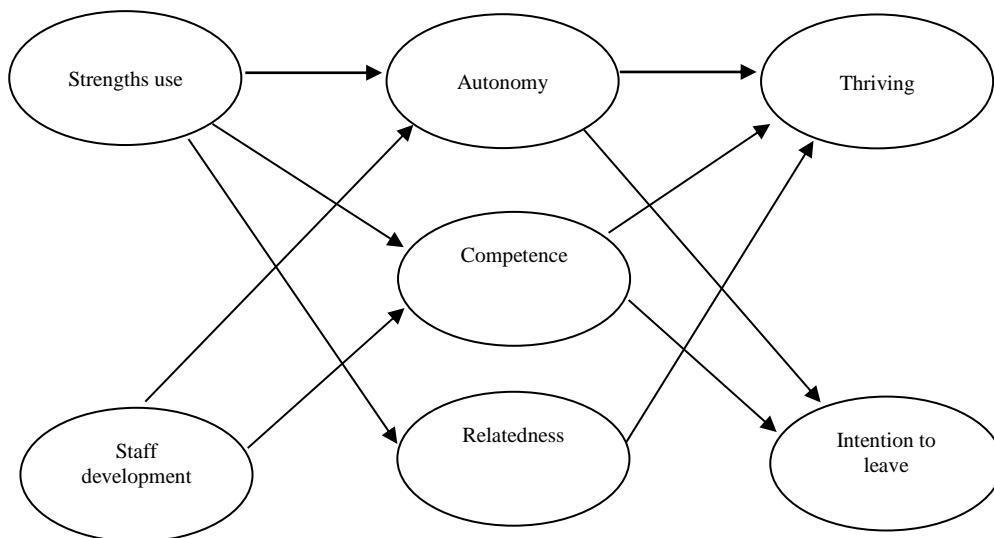
Figure 1. The hypothesised model

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Method

Participants

A total sample of 276 academics at three universities of technology were recruited, with the majority of the respondents hailing from the Vaal University of Technology (43%), Tshwane University of Technology (40%), and Central University of Technology (17%). Biographical characteristics of the participants are described in Table 1.

Table 1

Characteristics of the Participants (n = 276)

Item	Category	Frequency	Percentage
Gender	Male	123	44.6
	Female	153	55.4
Age	20 to 30 years	38	13.7
	31 to 40 years	73	26.4
	41 to 50 years	87	31.5
	51 to 60 years	58	21.0
	Over 60 years	20	7.2
Position	Temporary	52	18.8
	Permanent	222	80.4
Highest qualification	Diploma	7	2.5
	Postgraduate diploma	7	2.5
	Degree	20	7.2
	Honours degree	31	11.2
	Master's degree	128	46.4
	Doctoral degree	83	30.1
Tenure	Less than 5 years	51	18.4
	5 to 10 years	70	25.3
	11 to 15 years	46	16.6
	16 to 20 years	42	15.1
	21 to 25 years	31	11.2
	More than 25 years	36	13.1

Table 1 shows that the ages of the participants ranged from 20 years to 79 years. The mean age of participants was 43.83 ($SD = 11.10$).

Most participants were married (67%), and spoke Afrikaans (39.5%). Nearly half of the respondents (46.4%) held a master's degree, and most respondents (81.6%) had served in an academic profession for more than five years. Most participants (80.4%) were permanently employed.

Instruments

The *Strengths use Scale* (SUS) (Govindji & Linley, 2007) was applied to assess strengths use. Participants were asked 13 questions about the extent to which they used their strengths (for example, "I am regularly able to do what I do best"). All items were rated using an agreement-disagreement Likert format, varying from 1 (*strongly disagree*) to 7 (*strongly agree*). The scale showed an adequate internal consistency, with Cronbach's alpha of .95 for the scale (Govindji & Linley, 2007).

Three scales of the *Basic Psychological Need Satisfaction and Frustration Scale* (BPNSFS) (Chen et al., 2015) were used to measure psychological need satisfaction. The original 24-item BPNSFS was organised in a multidimensional structure of six scales. Three of these scales used tapped into experiences of satisfaction of the three psychological needs for autonomy (for example, "I feel a sense of choice and freedom in the things I undertake"). Competence (for example, "I feel confident that I can do things well"), and relatedness (for example, "I feel close and connected with other people who are important to me"). Items were rated on a five-point Likert scale, ranging from 1 (*completely untrue*) to 5 (*completely true*). The subscales showed an adequate internal consistency, with Cronbach's alphas ranging between .73 and .89 (Chen et al., 2015).

A section which relates to training and development of the *High-Performance HR Practices Questionnaire* (HPHRP) (Mostafa & Gould-Williams, 2014) was used to measure employee perceptions of the high-performance HR practice of staff development. The section consisted of four items (for example, "My organisation offers opportunities for training and development"). All items were rated using an agreement-disagreement Likert format, varying from 1 (*strongly disagree*) to 7 (*strongly agree*). Cronbach's alpha coefficients for the full measure ranged from .77 to .92.

The *Thriving at Work Scale* (TWS) (Porath, Spreitzer, Gibson, & Garnett, 2012) was used to measure the level of thriving. It is a 10-item scale measuring two dimensions – learning and vitality – of five items each. A sample item for learning was "I continue to learn more and more as time goes by". A sample item for vitality was "I feel alive and vital". The alpha coefficient was .93.

An adapted version of the *Turnover Intention Scale* (TIS) (Sjöberg & Sverke, 2000) was utilised to measure intention to leave. The modified TIS consisted of three items. A sample item of the scale included "I am actively looking for other jobs". Response options ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). In a South African context, Redelinghuys and Botha (2016) established a reliability coefficient of .90.

Data Analysis

The data analysis was carried out using Mplus Version 8.1 (Muthén & Muthén, 1998-2018) and SPSS 24 (IBM Corporation, 2016). In Mplus, the maximum likelihood estimation with robust standard errors (MLR) was used to test measurement and structural models. The following indices were used to assess model fit for measurement and structural models: absolute fit indices, including the chi-square statistic, standardised root mean residual (SRMR), and root mean square error of approximation (RMSEA). Moreover, incremental fit indices were employed, including the Tucker-Lewis index (TLI) and comparative fit index (CFI) (West, Taylor, & Wu, 2012). For TLI and CFI values to be acceptable, scores higher than .90. are required, while values larger than .95 indicate excellent fit. Both RMSEA and SRMR values lower than .08 indicate a close fit between the model and the data (Kline, 2010).

To compare models, changes in RMSEA, CFI, and TLI (greater than .01) were studied (Chen, 2007). Because of the free estimation of cross-loadings, indicators that include a correction for parsimony, that is, TLI, the Akaike information criterion (AIC), and the Bayes information criterion (BIC) were used (Wang & Wang, 2012). The AIC, which is a comparative measure of fit, is applicable when one estimates different models. The BIC indicates model parsimony (Kline, 2010). The lowest AIC and BIC values indicate the best-fitting model. Point estimate reliability (ρ) was computed for each scale (Raykov, 2009).

To determine whether any relationships were indirectly affected by independent variables, the procedure explained by Hayes (2018) was used.

Research Procedure

Applications for permission and ethical clearance were made by the researcher to the applicable governing department of three universities of technology in Gauteng and the Free State to conduct the study. Ethical clearance was obtained from the Ethics Committee at the university from which the research was undertaken (Ethics Number: NWU-HS-2016-0209). Prior to administering the questionnaires, the researcher checked the items for overlaps between the content of items of different measures. No issues were found in this regard. The researcher then administered the online electronic questionnaire in English to academic staff only. Participation in the project was voluntary. Participants completed an online questionnaire from the middle of February to mid-September 2017. Responses to the items were illustrated in an Excel spreadsheet; subsequently, it was converted to an SPSS dataset for analysis.

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Results

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Testing the Measurement Model

Using the MLR estimator in Mplus 8.1 (Muthén & Muthén, 1998–2018), confirmatory factor analyses were conducted with the measurement scales. Because the factor structures of the instruments were confirmed in previous studies (e.g. Mahomed & Rothmann, in press), a model development strategy was used in this study (Wang & Wang 2012). We specified a measurement model that included all the constructs the structural model. Because the same constructs were not evaluated in a single measurement model in previous studies, we modelled all variables in a single model and made changes based on the modification indices. The measurement model (model 1), consisted of seven first-order variables: thriving, autonomy satisfaction, competence satisfaction, relatedness satisfaction, strengths use, intention to leave, and training and development. Thriving consisted of two latent variables: vitality (measured by five items) and learning (measured by five items). Four items measured each of the three types of psychological need satisfaction, namely, autonomy, competence, and relatedness satisfaction. Strengths use was measured by 13 items and intention to leave by three items. All the latent variables in Model 1 were allowed to correlate.

Table 2 shows the fit statistics for the measurement model as well as the fit statistics for model development.

Table 2

Fit Statistics of Competing Measurement Models

Model	χ^2	*df*	TLI	CFI		RMSEA	SRMR	AIC	BIC
1	1707.75	797	.85	.86	.06*	[.06, .07]	.07	29240.56	29780.00
2	1564.91	756	.86	.87	.06*	[.06, .07]	.06	28272.78	28801.35
3	1410.80	717	.88	.88	.06*	[.06, .07]	.07	27642.75	28160.47
4	1356.31	679	.88	.89	.06*	[.06, .06]	.06	27091.57	27598.43
5	1231.37	642	.89	.90	.05*	[.05, .06]	.06	26449.24	26945.23
6	1158.35	641	.90	.91	.05	[.05, .06]	.06	26355.62	26855.62
7	1143.21	640	.90	.91	.05	[.05, .06]	.06	26331.95	26835.19

χ^2, chi-square statistic; *df*, degrees of freedom; TLI, Tucker-Lewis index; CFI, comparative fit index; RMSEA, root mean square error of approximation; SRMR, standardised root mean square residual; AIC, Akaike information criterion; BIC, Bayes information criterion

Table 2 shows that the fit of the measurement model was poor: $\chi2 = 1707.75$, *df* = 797, $p < .01$, TLI = .85, CFI = .86, RMSEA = .06, SRMR = .07. It was therefore decided to do model development to improve the fit of the model.

The analysis continued in an exploratory mode to improve the fit of the measurement model. Based on modification indices (MIs), four items were removed, namely, item 7 of the SUS ("My work gives me lots of opportunities to use my strengths") in Model 2 ($\Delta AIC = -967.78$, $\Delta BIC = -978.65$), item 2 of the SUS ("I always play to my strengths") in Model 3 ($\Delta AIC = -630.03$, $\Delta BIC = -640.88$), item 13 of the SUS ("I am able to use my strengths in lots of different ways") in in Model 4 ($\Delta AIC = -551.18$, $\Delta BIC = -562.04$), and item 8 of the TWS ("I feel alert and awake") in Model 5 ($\Delta AIC = -642.33$, $\Delta BIC = -653.20$). Furthermore, error covariances were allowed between items 8 ("Using my strengths comes naturally to me") and 9 ("I find it easy to use my strengths in the things I do") of the SUS in Model 6 ($\Delta AIC = -93.62$, $\Delta BIC = -89.61$) and items 1 ("I feel alive and vital") and 2 of the TWS ("I have energy and spirit") in Model 7 ($\Delta AIC = -23.67$, $\Delta BIC = -20.43$).

Model 7 yielded the following fit statistics: χ^2 = 1143.21; df = 640; p < .001; TLI = .90; CFI = .91; RMSEA = .05 [.05, .06]; and SRMR = .06. These statistics showed an acceptable fit for the measurement model. Model 7 fitted the data significantly better than Model 1 (ΔTLI = .05, ΔCFI = .05, ΔRMSEA = .01) and the other models.

Model Development

The analysis continued in an exploratory mode to improve the fit of the measurement model. Based on modification indices (MIs), four items were removed, namely, item 7 of the SUS ("My work gives me lots of opportunities to use my strengths") in Model 2 (ΔAIC = -967.78, ΔBIC = -978.65), item 2 of the SUS ("I always play to my strengths") in Model 3 (ΔAIC = -630.03, ΔBIC = -640.88), item 13 of the SUS ("I am able to use my strengths in lots of different ways") in in Model 4 (ΔAIC = -551.18, ΔBIC = -562.04), and item 8 of the TWS ("I feel alert and awake") in Model 5 (ΔAIC = -642.33, ΔBIC = -653.20). Furthermore, error covariances were allowed between items 8 ("Using my strengths comes naturally to me") and 9 ("I find it easy to use my strengths in the things I do") of the SUS in Model 6 (ΔAIC = -93.62, ΔBIC = -89.61) and items 1 ("I feel alive and vital") and 2 of the TWS ("I have energy and spirit") in Model 7 (ΔAIC = -23.67, ΔBIC = -20.43).

Model 7 yielded the following fit statistics: χ^2 = 1143.21; df = 640; p < .001; TLI = .90; CFI = .91; RMSEA = .05 [.05, .06]; and SRMR = .06. These statistics showed an acceptable fit for the measurement model. Model 7 fitted the data significantly better than Model 1 (ΔTLI = .05, ΔCFI = .05, ΔRMSEA = .01) and the other models.

Descriptive Statistics and Correlations of the Scales

Table 3 reports the descriptive statistics and Raykov's (2009) rho coefficients of the measuring battery as well as the product-moment correlation coefficients.

Table 3

Descriptive Statistics, Reliability Coefficients, and Correlations of the Scales (n = 276)

Variable	ρ	Mean	SD	1	2	3	4	5	6	7	8
21. Vitality	.92	5.35	1.38 (1.19)	-	-	-	-	-	-	-	-
22. Learning	.90	5.93	0.99 (0.80)	.68	-	-	-	-	-	-	-
23. Autonomy satisfaction	.82	3.68	0.84 (0.71)	.62	.64	.79	-	-	-	-	-
24. Competence satisfaction	.85	4.26	0.66 (0.55)	.42	.40	.50	.67	-	-	-	-
25. Relatedness satisfaction	.82	3.68	0.83 (0.67)	.33	.31	.39	.62	.38	-	-	-
26. Strengths use	.92	5.70	0.82 (0.85)	.58	.55	.69	.72	.61	.39	-	-
27. Intention to leave	.89	4.60	1.47 (1.01)	-.36	-.34	-.42	-.037	-.16	-.25	-.26	-
28. Training and development	.90	2.78	1.32 (1.01)	.40	.38	.47	.36	.11	.19	.31	-.38

Note: All correlations were statistically significant ($p < .01$).

The findings suggested the rho coefficients of each measure were adequate, with values of $\geq .70$, which confirms the internal consistency of the measures. Vitality and learning (the two dimensions of thriving) were statistically and significantly and positively related (large effect), sharing 46% of the variance. Vitality and learning were statistically and practically significantly and positively related to autonomy satisfaction (both large effects), competence satisfaction (both medium effects), relatedness satisfaction (both medium effects), strengths use (both large effects) and training and development (both medium effects).

Strengths use was statistically and practically significantly related to autonomy satisfaction (large effect), competence satisfaction (large effect) and relatedness satisfaction (medium effect). Furthermore, training and development was statistically and practically significantly related to autonomy satisfaction and strengths use (both medium effects). Intention to leave was statistically and practically significantly and negatively related to vitality, learning, autonomy satisfaction, and training and development (all medium effects).

Testing the Structural Model

The structural model was tested based on the measurement model. The fit statistics of the structural model showed a good fit of the structural model to the data on most of the fit indices: $\chi^2 = 1143.21$; $df = 640$, $p > .0001$; CFI = .91; TLI = .90; and RMSEA = .05 [.048, .058], $p < .01$. Table 4 shows the standardised regression coefficients of the variables.

Table 4

Standardised Regression Coefficients

Variable	Estimate	SE	Estimate/SE	*P*
Autonomy satisfaction ON				
Strengths use	.67	.06	11.19	.000**
Training and development	.15	.06	2.39	.017*
Competence Satisfaction ON				
Strengths use	.64	.08	7.70	.000**
Training and development	-.09	.08	-1.15	.250
Relatedness Satisfaction ON				
Strengths use	.37	.07	5.15	.000**
Training and development	.07	.08	0.91	.363
Thriving ON				
Autonomy satisfaction	.72	.15	4.85	.000**
Competence satisfaction	-.09	.11	-0.77	.442
Relatedness satisfaction	-.15	.09	-1.63	.103
Strengths use	.22	.11	2.10	.035*
Training and development	.18	.08	2.09	.036*
Turnover intention ON				
Autonomy satisfaction	-.31	.13	-2.31	.021*
Competence satisfaction	.09	.10	0.88	.380
Relatedness satisfaction	-.05	.91	-0.53	.598
Strengths use	.01	.10	0.08	.936
Training and development	-.27	.08	-3.50	.000**

** $p < .01$

* $p < .05$

Next, the obtained relations of the structural model are discussed (see Table 4 and Figure 1). Strengths use had statistically significant direct and positive effects on autonomy satisfaction (β = .67, SE = .06, p < .001), competence satisfaction (β = .64, SE = .08, p < .001), and relatedness satisfaction (β = .37, SE = .07, p < .001). Hypothesis 1 is accepted. Strengths use predicted autonomy satisfaction (H1a), competence satisfaction (H1b) and relatedness satisfaction (H1c). Training and development had a statistically significant and positive effect on autonomy satisfaction (β = .15, SE = .06, p < .05). However, it did not have statistically significant effects on competence satisfaction (β = -.09, SE = .08, p > .05) and relatedness satisfaction (β = .07, SE = .08, p > .05). Hypothesis 2 is partially accepted. Training and development predicted autonomy satisfaction (H2a), but not competence satisfaction (H2b) and relatedness satisfaction (H2c).

Autonomy satisfaction (β = .72, SE = .15, p < .01) had a statistically significant effect and positive effect on thriving. However, competence satisfaction (β = -.09, SE = .11, p > .05) and relatedness satisfaction (β = -.15, SE = .09, p > .05) did not have a statistically significant effect on thriving. Hypothesis 3 is partially accepted. Autonomy satisfaction predicted thriving (H3a). Although, competence (H3b) and relatedness satisfaction (H3c) did not predict thriving in the structural model, they were positively associated with thriving.

Strengths use had a statistically significant and positive effect on thriving (β = .22, SE = .11, p < .05), but it did not have a statistically significant effect on intention te leave (β = .01, SE = .10, p > .05). Hypothesis 4 is partially accepted. Strengths use statistically significantly and positively predicted thriving (H4a) but not intention to leave (H4b). Training and development had a statistically significant and positive effect on thriving (β = .18, SE = .08, p < .05), and a statistically significant and negative effect on intention to leave (β = -.27, SE = .08, p < .01). Hypothesis 5 is accepted.

Autonomy satisfaction (β = -.31, SE = .06, p < .05) had a statistically significant negative effect on intention to leave. Competence satisfaction (β = .09, SE = .10, p > .05) did not have a statistically significant effect on intention to leave. Relatedness satisfaction (β = -.05, SE = .91, p > .05) also did not have a statistically significant effect on intention to leave.

Hypothesis 6 is partially accepted. Autonomy satisfaction negatively predicted intention to leave (H6a). However, competence (H6b) and relatedness satisfaction (H6c) did not predict intention to leave in the structural model, although they were negatively associated with intention to leave.

Indirect Effects

The procedure suggested by Hayes (2018) was followed to investigate the indirect effects of strengths use as well as training and development on thriving at work and intention to leave via psychological need satisfaction. Bootstrapping is used to generate an empirically derived representation of the sampling distribution of the indirect effect, and this representation is used for the construction of confidence intervals. Bootstrapping (with 10 000 samples) was used to construct two-sided bias-corrected 95% confidence intervals (CIs) to evaluate indirect effects using 10 000 bootstrap samples (see Table 5). The confidence intervals, in this case, indicate the values between which lower and upper values of the indirect effect varied in 95% of the 10 000 bootstrap estimates that were computed. If the confidence interval is above zero, it means that the indirect effect is positive. If the confidence interval is below zero, the indirect effect is negative. There is clear evidence that the indirect effect is positive (or negative) to a "statistically significant" degree if the confidence interval does not include zero (Hayes, 2018, p. 101).

Table 5 reports indirect effects of strengths use and training and development on thriving and intention to leave.

Table 5

Indirect Effects of Strengths use and Training and Development on Thriving and Intention to Leave

Variable	Thriving		Intention to leave	
	Autonomy satisfaction			
	β	95% CI	β	95% CI
Strengths use	.49**	[**.25, .76**]	-.21**	[**-.45, -.01**]
Training and development	.11	[**.02, .25**]	-.05	[**-.13, -.01**]
	Competence satisfaction			
Strengths use	-.06	[-.22, .11]	.06	[-.09, .19]
Training and development	-.01	[-.01, .07]	-.01	[-.05, .01]
	Relatedness satisfaction			
Strengths use	-.06	[-.15, .01]	-.02	[-.10, .05]
Training and development	-.01	[**.06, .01**]	-.00	[-.04, .01]

** $p < .01$

Table 5 shows that strengths use indirectly affected thriving via autonomy satisfaction ($p < .01$, [.25, .76]) as well as intention to leave ($p < .01$, [-.45, -.01]). H7a and H9a are accepted. Furthermore, training and development affected thriving via autonomy satisfaction ($p > .05$, [.02, .25]) and relatedness satisfaction ($p > .05$, [.01, .06]). H8a and H8c are accepted. Training and development affected intention to leave negatively via autonomy dissatisfaction ($p > .01$, [-.13, -.01]). The sizes of the indirect effects were larger for strengths use than for training and development. H10a is accepted. No other significant indirect effects were found.

Discussion

This study aimed to test a structural model that extricated the nature of relationships between strengths use and training and development on psychological need satisfaction, notably autonomy satisfaction, competence satisfaction, and relatedness satisfaction, and how that predicted thriving at work and intention to leave. The results supported a model in which strengths use predicted autonomy, competence and relatedness satisfaction.

Training and development strongly predicted autonomy satisfaction. Strengths use indirectly affected thriving positively via autonomy satisfaction. Low strengths use predicted intention to leave via low autonomy satisfaction. Strengths use, as well as training and development, also had direct effects on thriving and intention to leave.

Vitality and learning (the two dimensions of thriving), strengths use as well as training and development were positively associated with autonomy, competence and relatedness satisfaction, although the strength of the correlations varied. Intention to leave was moderately related to vitality, learning, autonomy satisfaction, and training and development. Therefore, it seems that strengths use results in both vitality and learning (Linley & Harrington 2006, p. 41). Strengths use was also positively related to autonomy, competence, and relatedness satisfaction. Linley and Harrington (2006) stated that higher levels of strengths use generate higher feelings of competence and autonomy because, when using strengths, individuals doing what they naturally do best (Linley, Nielsen, Wood, Gillett, & Biswas-Diener, 2010).

Training and development imply offering employees the opportunity to understand their roles and develop the needed skills and abilities to perform their jobs (Suazo et al., 2009). Training and development predicted autonomy satisfaction in this study, while it was also expected that it would predict competence and relatedness satisfaction. Gellatly et al. (2009) stated that training opportunities might allow for autonomy satisfaction by increasing feelings of internal control (Marescaux, De Winne, & Sels, 2012).

The results showed that all three psychological needs were related to thriving at work, which confirms the ideas put forward by Spreitzer and Hwang (2019). Indeed, it seems that autonomous self-regulation is associated with vitality, presumably because it is less draining than efforts to control the self (Vansteenkiste et al., 2007). Also, when academics are doing something for enjoyment or interest (rather than for instrumental reasons), they exert less effort, which enhances their feelings of vitality. The associations between learning and psychological need satisfaction are in line with expectations given that these dimensions are essential for the optimal development of people (Spreitzer & Hwang, 2019). Although all three psychological needs were positively associated with thriving at work, only one, namely autonomy satisfaction predicted thriving in the structural model. Autonomy satisfaction is crucial for individual functioning, which might explain why it had the strong effect in the structural model.

However, the strong correlations among autonomy, competence and relatedness satisfaction (pointing to shared variance between these constructs) could have reduced the contributions of the competence and relatedness satisfaction in the structural model. The indirect effects showed that autonomy satisfaction mediated the relation between strengths use and thriving as well as intention to leave. Furthermore, autonomy satisfaction mediated the relation between training and development and thriving as well as intention to leave. The sizes of the indirect effects were larger for strengths use than for training and development.

The study had several limitations. First, self-report measures were used exclusively to gather data, which might cause overstated results. Concerning the results of strengths use, the results were best interpreted as perceived strengths use; testing whether such strengths are being used will require behavioural measures. Second, the sample consisted of only three higher education institutions, and therefore, the findings cannot be generalised to other higher education institutions. Future studies should focus on the role of strengths use, training and development and psychological need satisfaction on thriving and intention to leave in other institutions. Third, given the cross-sectional design of the study, it was not possible to study the permanence of strengths use, psychological need satisfaction, and thriving over time. Longitudinal and experimental studies be conducted to validate the findings of this study. Fourth, this study focused on positive functioning. Future studies should include indicators of negative work outcomes (e.g. apathy towards work) in model testing.

It is imperative that the management of these institutions recognise the vital role that strengths use plays in the fulfilment of psychological needs satisfaction, thriving at work and reducing intention to leave. Higher education institutions should create environments in which academics can use their strengths (Harzer & Ruch, 2013, 2014) and satisfy their psychological needs. Psychological need satisfaction could be enhanced by allowing decision making discretion, by sharing information about the institutions and their strategies, and by promoting civility (Spreitzer & Hwang, 2019). Training and development interventions are vital to support strengths use, psychological need satisfaction and thriving of individuals. Academic institutions can provide strengths use support by allowing academics to engage in tasks in line with their strengths or by allowing employees with complementing skills to collaborate (Van Woerkom & Meyers, 2015).

Conclusion

Enabling academic staff members in universities of technology to use their strengths and providing sufficient training and development opportunities contributed to thriving and reduced intentions to leave institutions. Strengths use impacted the thriving of academic staff members indirectly by enhancing the satisfaction of their autonomy needs. In addition to promoting strengths use of academics, autonomy satisfaction seems key to thrive and to remain in the institution. This study contributes to knowledge regarding the associations among strengths use, training and development, psychological need satisfaction, thriving and intention to leave in a non-student context in an African sample.

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CHAPTER 5

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

Chapter 5 concludes the study consistent with the research objectives. Limitations of the research are deliberated, and recommendations formulated. Furthermore, research opportunities emanating from this study are offered.

5.1 Conclusions

The conclusions described below are drawn from the studies in the three research articles.

Thriving of Academics: The Role of Job Crafting and Human Resource Practices

The first research objective of this study was to test the idea that job crafting and perceived high-performance HR practices interacted to effect thriving of academics. Academic staff at South African HEIs encounter exhaustion and discouragement, which are not acknowledged or addressed by institutions (Herwitz, 2018). Thus it is crucial for higher education institutions to have employees who are thriving academics, as employees who are thriving, experience growth and motion marked by a sense of feeling energised (vitality) and recognise continous improvement this means getting better at what they do (learning) (Spreitzer, Sutcliffe, Dutton, Sonenshein, & Grant, 2005). This permits them to manipulate their careers and adapt to a transforming environment (Akkermans & Tims, 2017). It was proposed that personal and contextual factors may be associated to thriving at work. The personal factor, in this case, is job crafting. Job crafting considers the role of proactive and self-initiated behaviours that academics could use to alter their work roles (Berg, Dutton, & Wrzesniewski, 2013). The organisational factor is the perception of high-performance HR practices.

The conclusion of this study corroborated a two-factor structure of thriving (vitality and learning), a three-factor structure of job crafting, and a seven-factor structure of high-performance HR practices. Furthermore, the findings supported a model in which job crafting and high-performance HR practices interacted to affect the thriving of academics in higher education institutions.

Job crafting was a stronger predictor of thriving than high-performance HR practices. Task, cognitive and relational dimensions of job crafting were all practically and statistically significantly related to thriving at work dimensions of learning and vitality with a medium effect. However, high-performance HR practices such as selection, training and development, job security, promotion, communication and reward were all practically and statistically significantly related to the thriving at work dimensions of learning and vitality with a medium effect. However, job design was practically and statistically significantly related to the thriving at work dimensions of vitality (medium effect) and learning (small effect). This was confirmed by Iverson and Zatzick (2007), McClean and Collins (2011) and Price (2011). Good job design comprises the way an employee's tasks are organised, the amount of autonomy they have over their work schedules, their access to ample resources and the procedures they use to fulfil their job. It also ensures that employees use a mixture of skills within their job and encourages them to take on higher levels of responsibility.

Employee perceptions of high-performance HR practices had a direct impact on the extent to which academics thrive. Academics who perceive high-performance HR practices experience higher levels of thriving (i.e. vitality and learning). Communication, promotion, and selection had the most active associations with thriving. However, the findings suggested that high-performance HR practices played a significant and more important role when academics were not crafting their jobs. More specifically, when academics could not or did not want to recraft their jobs, high-performance HR practices are critical for maintaining a high level of thriving.

Moderating effects between continuous variables, hierarchical regression analyses were performed, and high-performance HR practices were found to moderate the relationship between job crafting and thriving significantly. Overall, these results indicate that high-performance HR practices have a direct influence on thriving beyond what can be accounted for by job crafting, and moderate the relation between job crafting and thriving.

Strengths use and deficit correction, thriving, and performance of academics at universities of technology

The second research objective was to investigate the relationships between strengths use and deficit correction, thriving and performance in higher education institutions.

The potential of workers to develop at work is crucial for the overall growth and development of an organisation (Abid, Zahra, & Ahmed, 2016). A growing workforce is vital for an organisation's competitive advantage and sustainable performance (Prem, Ohly, Kubiceki, & Korunka, 2017). However, the frequency analyses of this study showed that approximately 11% of the participants did not thrive at all. Regarding the dimensions of thriving, 22% lacked energy and did not look forward to each day.

The structural model confirmed that perceived organisational support for strengths use had an impact on the thriving of employees. Therefore, when these institutions supported the use of talents and strengths during the performance of tasks and academic duties, employees felt the most vitality. Deficit correction behaviour and strengths used by individual academics also contributed to thriving at work. When academics could develop their weak points and improve on their tasks and academic duties, they felt more energised and experienced learning. Together, these three variables (i.e. perceived organisational support for strengths use, individual strengths use, and deficit correction) explained a large percentage of the variance in thriving at work.

Furthermore, 10% reported that they were not learning and improving. A total of 42% of the sample endorsed the "agree" and "strongly agree" responses on the vitality dimension, while 57% endorsed these responses on the learning dimension. Both dimensions of thriving (learning and vitality) were related to perceived organisational support for strengths use, individual strengths use, individual deficit correction and perceived organisational support for deficit correction. Furthermore, both dimensions of thriving (learning and vitality) were related to task and contextual performance. Thriving at work was best predicted by three variables, namely perceived organisational support for strengths use, individual deficit correction and individual strengths use.

Strengths use, and deficit correction by the organisation and the individual predicted 48.5% of the variance in thriving, and in turn, thriving at work predicted performance. Thriving predicted 10.1% of the variance in performance. The independent variables (strengths use and deficit correction) explained 48% of the variance in thriving. Thriving explained 10% of the variance in performance. Perceived organisational support for strengths use, individual deficit correction and individual strengths use indirectly affected task and contextual performance via thriving. Thriving had a positive effect on performance. However, performance-related pay had a small

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negative effect on performance. The interaction between thriving and performance-related pay accounted for a significant addition of 3% in the variance of performance.

The results showed that POS for strengths use was the strongest predictor of thriving at work. POS for strengths use refers to employees' beliefs and observations that their institutions encourage the use and application of their strengths in the workplace (Van Woerkom et al., 2016). While previous research has shown that POS for strengths use is a significant predictor of work engagement (Stander & Mostert, 2013), this study confirmed its predictive value for thriving at work. Employees who perceived that their institutions supported their strengths use, reported that they experienced energy and learning at work.

Strengths use, training and development, thriving, and intention to leave: The mediating effects of basic psychological need satisfaction

The third research objective of the study was to examine the extent to which strengths use influences the relationship of psychological need satisfaction and the intention to leave, and thriving in higher education institutions. It is well known that HEIs in South Africa have undergone significant changes over the past decades (Bentley, Coates, Dobson, Goedegebuure, & Meek, 2013), impacting the well-being of staff (Barkhuizen, Rothmann, & Van de Vijver, 2014). Moreover, the elevated turnover rate of academic staff poses a significant challenge to these HEIs (Ng'ethe, Iravo, & Namusonge, 2012). Focusing on individuals' strengths enables them to thrive (Seligman, Steen, Park, & Peterson, 2005). The mechanisms that intervene between strengths use and favourable psychological and organisational outcomes were still untapped, hence an investigation was conducted into the role of need satisfaction in thriving and intention to leave an institution.

Findings from the study showed that the thriving at work dimensions (vitality and learning) were practically and statistically significantly negatively related to intention to leave, with a medium effect. Learning and vitality dimensions were practically and statistically significantly related to strengths use, with a large effect. Autonomy satisfaction and competence satisfaction were practically and statistically significantly positively related to the dimensions of learning and vitality, with a large effect. Strengths use had statistically direct and positive effects on autonomy satisfaction, competence satisfaction, and relatedness satisfaction. Training and development had a statistically significant and positive effect on autonomy satisfaction.

However, it did not have statistically significant effects on competence satisfaction and relatedness satisfaction.

Autonomy satisfaction had a statistically significant effect and positive effect on thriving. However, competence satisfaction and relatedness satisfaction did not have a statistically significant effect on thriving. Strengths use and training and development had statistically significant and positive effects on thriving. Autonomy satisfaction had a statistically significant negative effect on intention to leave. As expected, training and development had a statistically significant negative effect on intention to leave. Autonomy satisfaction mediated the relation between strengths use and thriving as well as intention to leave.

Furthermore, autonomy satisfaction mediated the relation between training and development and thriving as well as intention to leave. The sizes of the indirect effects were larger for strengths use than for staff development. No other significant indirect effects were found.

The results provided support for a model in which strengths use predicted psychological need satisfaction. Strengths use is energising and authentic: "When we use our strengths, we feel good about ourselves, we are better able to achieve things, and we are working toward fulfilling our potential" (Linley & Harrington, 2006, p. 41). Strengths use positively related to autonomy, competence, and relatedness satisfaction. Linley and Harrington (2006) stated that higher levels of strengths use generate higher feelings of competence and autonomy because, when using strengths, an individual is doing what he/she naturally does best; he/she becomes intrinsically motivated to do so (Linley, Nielsen, Wood, Gillett, & Biswas-Diener, 2010). A number of other studies argue that strengths use leads to higher feelings of autonomy, competence, and relatedness (Linley et al., 2010). This linkage was also confirmed by De Rooij (2017). This study appears to do the same.

The outcomes furthermore showed that only autonomy satisfaction had a positive effect on thriving at work. Autonomy satisfaction implies that employees perceive that they can direct and regulate their behaviour (Deci & Ryan, 2000). Academic participants therefore preferred autonomy in their work environment to enable them to thrive, leading to decreased intention to leave. Moreover, strengths use and training and development had positive effects on thriving. If academics were to be given the opportunity to use their strengths, and they were to perceive the training and development as adequate, then they would exhibit more innovative work

behaviour, generate creative ideas, champion new ideas, and seek out new ways of working, hence deciding not to leave an organisation.

The indirect effects showed that autonomy satisfaction mediated the relation between strengths use and thriving as well as intention to leave. Furthermore, autonomy satisfaction mediated the relation between training and development and thriving as well as intention to leave. The sizes of the indirect effects were larger for strengths use than for staff development.

5.2 Limitations

Several methodological limitations are worth declaring.

The first set of limitations concerned the questionnaires – self-report measures were used exclusively to gather data, which possibly caused overstated results (Taris, 2006) owing to the personal nature of self-reporting. However, job crafting is a significant predictor of employee outcomes, such as performance ratings, job satisfaction and work engagement (Peral & Geldenhuys, 2016) and since 2012, job crafting has become an increasingly popular research topic but the majority of studies were qualitative in nature. Slemp and Vella-Brodrick (2013) established a measure to empirically test relationships between job crafting and employee outcomes that can be used for psychological research. This measure is based on the novel types of actions that represented job crafting and is hence consistent with Wrzesniewski and Dutton's (2001) model of job crafting that contains task, relational, and cognitive forms of job crafting. These three types of activities represent three different yet consequential ways in which employees can mould their work experience.

Furthermore, this study focused on employee perceptions of high-performance HR practices rather than on managers' evaluations of such practices. Employee perceptions are vital because high-performance HR practices are not fundamentally observed as intended due to differences in interpretation and personal inclinations (Nishii & Wright, 2008). Employees' perceptions of high-performance HR practices are to be expected to be more predictive of employee outcomes than the evaluations provided by managers (Kehoe & Wright, 2013). This study built on recommendations made by Boon and Kalshoven (2014) whose empirical studies suggest that the relationship between high-performance HR practices and employee outcomes be supervised using employee responses.

This study was the first to determine the empirical relationships between job crafting, high-performance HR practices and thriving in South Africa.

Moreover, this study used a relatively new measuring instrument, namely the Strengths Use and Deficit Correction Questionnaire (SUDCO) (Van Woerkom et al., 2016). Building on recommendations of the South African study by Brouwers, Mostert, and Mtshali (2017) to use the questionnaire on a varied population, which includes people from the different sectors of the economy and in this case academics, contributes to making the instrument more universally applicable for the South African population.

The second set of limitations concerned the design, scope and sample – one must bear in mind that the quantitative nature of this research has some drawbacks (Creswell, 2013) and the potential of common method bias characterises quantitative studies as a result of influences such as social desirability and transient mood states (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Furthermore, in cross-sectional research design, the causality of relationships cannot be presumed or determined. However, the researcher is confident about the robustness of the findings and viewed the cross-sectional design as a good design since the field of positive psychology is dominated by studies using quantitative, correlational, and individual-level analyses. In the future, however, other designs may be used to do more in-depth, multilevel, longitudinal and qualitative research to allow for greater causal inferences (Ployhart & Vandenberg, 2010).

The scope of the study limited the generalisation of the results in that it only focused on three higher education institutions in South Africa within Gauteng and the Free State. Hence, external generalisation cannot be inferred from this study. Future studies should incorporate other higher education institutions as well as other professions in South Africa. The relatively small and homogeneous sample hindered the examination of the personal and contextual factors promoting thriving at work and its outcomes from a multilevel perspective. Supplementary research is needed regarding the effect of the full spectrum of personal and contextual factors on thriving at work from a multilevel perspective.

Regardless of the limitations of this study, the present findings have significant implications for practice and future research.

5.3 Recommendations

5.3.1 Recommendations to Solve the Research Problems

Various aspects should be addressed to ensure the promotion of thriving at work. When employees are thriving at work, they are energetic and committed to the work they are doing. They are continually learning new things. It is central that both vitality and learning be present in order to reap all the benefits that thriving employees bring to the organisation. Given the increasing evidence of the relationship between thriving at work and various desired individual and organisational outcomes, a shift in attitudes, practices and policies is necessary to ensure that employers and employees recognise the critical role they can play in promoting thriving.

To promote thriving at work, the focus should be on personal and contextual factors such as job crafting, high-performance HR practices, strengths and psychological need satisfaction.

Job crafting captures the dynamic changes employees render to their job designs in ways that can create numerous positive outcomes. However, it is crucial that job crafting be applied and administered effectively. To be appropriately implemented, job crafting needs alignment with both the employee's and the university's goals and should be embraced and supported by all seniority levels of the organisation.

In order to entice and hold on to academic staff, it is suggested that higher education institutions try to be innovative in the recruitment, selection and onboarding processes. True innovation stems from the ability to knock down existing structures and arrange them back in a more meaningful manner. It is suggested that the HR department together with the academics identify and remove the aspects of work that are not necessarily beneficial to the achievement of the overall purpose of being an academic and to then successfully reassemble the relevant parts. In this way, academics will be job designing, which puts them in the driver's seat and helps them to proactively reorganise the boundaries of their jobs and to reframe how they would relate to their job and ponder about their contribution to the organisation, scrutinising the larger purpose of their work and whom it might benefit.

High-performance HR practices and job crafting are both essential constructs for thriving, however, the findings of the study indicated that job crafting is more critical to thrive than high-performance HR practices. It is therefore recommended that the HR department together with the supervisor make use of the JCQ, which is a statistically validated tool to measure the extent to which their staff engage in job crafting strategies (Slemp & Vella-Brodrick, 2013) by indicating the frequency with which they have engaged in each job crafting activity. The HR department can then initiate the use of the Job Crafting Exercise either as a group workshop or one-on-one coaching. It is a tool that allows employees to apply the job crafting interventions by supplying the employees with an adaptable set of building blocks to build a graphic picture of how employees presently spend their energy and time at work – the duties they do, the exchanges and communications they have with others, and what offers them the most satisfaction and vitality. They can afterwards identify the minor changes they can make to support their tasks, relationships, and cognitive boundaries with the new performance goals and strategies and conditions needed for academics to accomplish their values and goals (Chirkov, 2007) to allow for well-being.

The Job Crafting Exercise has been used in a variety of ways successfully by many companies in the private sector internationally. Investing in it, within the higher education sector in South Africa might prove beneficial as academics can be trained how to engage in activities that potentially impact proactive behaviour and thriving at work. Academics can take parts of their work and reconfigure it, and they should end up with a more meaningful job to better suit their talents and interests and the university's vision and strategy, contributing to a healthy workforce.

High-performance HR practices are viewed as a set of interconnected human resource practices intended to improve the quality and performance of employees in organisations (Messersmith, Patel, Lepak, & Gould-Williams, 2011). With regards to the *ability-enhancing HR practices* (selection, training and development), as already suggested, innovative selection methods and onboarding are crucial to select academics and keep them happy. There has to be a learning culture, and this learning culture needs to be in sync with the universities' values and the broader macro environment. The higher education institutions should not silo their learning and development (L&D) away from their job crafting strategies and interventions and their employee engagement initiatives. Instead, there should be an integrated approach.

Furthermore, L&D should not be a top-down approach. Employees should be able to create their individual learning goals in line with their personal development plan for job-related skills, and personalised L&D programmes should be designed to provide academics with competencies needed to satisfy their career aspirations (Mostafa, Gould-Williams, & Bottomley, 2015). This can imply that universities value their employees and are prepared to invest in their careers and expectations.

With regard to the *motivation-enhancing HR practices* (job security, promotion and performance-related pay), time should be devoted to developing a proper performance-related pay management structure and process by including all role players to ensure a shared comprehension of the purpose and the implementation and of what the performance at different levels looks like (Seyama & Smith, 2013). Offering performance feedback creates opportunities for learning. Opportunities for promotion and job security should be communicated; this reveals the universities' appreciation and recognition of employees' long-term worth.

Opportunity-enhancing HR practices (autonomy and communication). Spreitzer and Porath (2012) advocates for the sharing of information about the organisation hence the universities need to make sure that they communicate their strategy, culture and values to the academics. Meaningful communication reinforces to employees that their contributions are valued and not only reassures them about the importance of their job; this is vital to promote feelings of competence, which increase vitality and growth. Advancement focused employees are most motivated when the communication they obtain emphasises how they can succeed in attainment of their goals (Van-Dijk & Kluger, 2004). Furthermore, providing for decision-making discretion and latitude in the job will allow them to craft their jobs (Wrzesniewski & Dutton, 2001) in a manner that provides for the ability to modify roles in a manner that will likely satisfy the employee's needs for autonomy and competence, which fuels their vitality and growth. Moreover, the well-designed working environment should offer academics places for focused work as well as places for interaction with colleagues.

Strengths - higher education institutions should invest resources in getting academics to thrive at work via the balanced strength-and-deficit-based approach. This approach should be seen as a core development tool for academics to increase employees' thriving at work. Collaboration with the L&D department and supervisors is needed to provide staff with opportunities to apply

their strengths and develop their weaknesses and thereby enhance the process of adapting and handling the changes in the academic environment. Universities should be aware of the irrefutable potential of supporting their employees' use of their strengths and how using their strengths can correlate to performance. The L&D department can assess the degree to which performance increases with the way employees perceive organisational support. This may further promote the implementation of perceived organisational support if performance has increased. Moreover, strengths of employees can be identified and appreciated by informal feedback from heads of departments and co-workers when an employee effectively uses one's strengths (Bouskila-Yam & Kluger, 2011).

Psychological need satisfaction - basic need satisfaction not only fosters human motivation but is also vital for well-being, therefore, crucial in the upkeep of intrinsic motivation and the degree to which people feel their environment supports their basic psychological needs (Deci & Ryan, 2008). Higher education institutions should be familiar with the crucial role that strengths use plays in the fulfilment of psychological needs satisfaction and thriving at work. Environments in which academics can use their strengths need to be created since the role of place and setting in facilitating or confining strengths use has been acknowledged (Harzer & Ruch, 2013, 2014). Self-determination theory (SDT) further states that basic need satisfaction is determined mainly by on a person's social context (Ryan & Deci, 2000). Universities should improve working conditions which are related to competency, autonomy, and relatedness needs of academics. This can be done by revising policies as well the transforming the organisational culture to foster more strengths use so that academics can experience more need satisfaction. A work environment that allows academics to experience enough autonomy and decision making opportunities, combined with feeling competent to act productively as an academic and feeling connected to pertinent others abet thriving at work. In this manner, universities will have better efficiency regarding thriving at work, resulting in higher work adaptation and participation (Silman, 2014).

5.3.2 Recommendations for Future Research

The following recommendations are formulated for future research:

Firstly, to enhance external validity, future research should expand the assessment of thriving at work to sizeable and more culturally diverse samples representing other occupations, sectors

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and geographical locations of South Africa. Longitudinal and multi-level studies are suggested so that the effects of HR practices and job crafting behaviours on thriving can be tracked over time instead of at one point in time, which will allow greater insight into reciprocal influences over time. Also, forthcoming studies should place emphasis on the design of interventions tailored explicitly for promoting thriving at work. It would be interesting to determine how the incorporation of job crafting interventions with HR practices and job crafting strategies would influence thriving at work this will expand on our understanding on antecedents that is important because it sheds light on the circumstances in which job crafting takes place and on how job crafting can be stimulated in practice. Future studies could also inspect whether some individuals, based on their characteristics (age, gender, job level, tenure), are more prone to benefit from job crafting strategies than others.

Berg, Wrzesniewski, and Dutton (2010) advised that senior ranked employees were inclined to see the challenges of job crafting as positioned primarily within the self, attributing these challenges to their own expectations of how they and others should spend time at work. In comparison, employees in junior ranked jobs inclined to see the challenges of job crafting as limits imposed on the by others in their environment, ascribing the challenges to others not granting them the necessary autonomy to craft their jobs. Therefore, it might be that perception of an employee's position influences perceived opportunities for job crafting. This needs to be further investigated. Thriving at work positively relates to individual job performance (Paterson, Luthans, & Jeung, 2014; Porath, Spreitzer, Gibson, & Garnett, 2012; Spreitzer & Porath, 2012). However, relatively little research has been devoted to examining the relationship between collective thriving and group or organizational performance. This needs to be further investigated.

High-performance HR practices such as communication, promotion, and selection had the strongest associations with thriving. It is not known why this is the case, hence it is suggested that future research be conducted to qualitatively analyse why certain HR practices are more important than others. By combining qualitative and quantitative research, a broader perspective could be obtained (Creswell, 2013). It was not possible to study the permanence of strengths use, psychological need satisfaction and thriving over time; it is suggested that a diary study be conducted in order to gain a contextual understanding of users' behaviour and experiences over time.

Secondly, the present study tested a structural model of the SUDCO with thriving at work and investigated if perceived performance-related pay moderated the relation between thriving and performance. In order to draw further specific conclusions about the relation of SUDCO behaviour to these combined constructs, longitudinal research studies are advised (Govindji & Linley, 2007). Since the field of strengths use and deficit improvement is still fairly new, particularly among academics in South Africa, it would correspondingly be beneficial to investigate causal relationships of the SUDCO scales with other essential outcome variables relevant to academics context such as intention to leave and flourishing. Furthermore, studies may also investigate whether some individuals, based on their characteristics (age, gender, job level, tenure) are more likely to benefit from SUDCO behaviour than others.

5.4 Contributions of the Study

This study formulated the following *contributions* to the field of positive psychology, the study of happiness and well-being (Seligman & Csikszentmihalyi, 2000).

Firstly, the study extends knowledge by revealing the nature of and the processes involved in the relationships between the key personal and organisational factors and well-being outcomes for both individuals and their employers. This was done by showing that there was a relationship between job crafting and high-performance HR practices in thriving at work. Compared to constructs like burnout, work engagement and job satisfaction, workplace thriving has not enjoyed much attention in academic literature and practice. Job crafting as a personal factor played a significant role in predicting thriving at work. The more academics practised cognitive, task and relational job crafting, the more they experienced vitality and learning in their jobs. High-performance HR practices as organisational factors played an essential supporting role in thriving at work. It seemed that communication, promotion, and selection had the strongest associations with thriving. However, high-performance HR practices played a significant and more important role when academics were not crafting their jobs. Not every employee in every context may feel inclined to make changes to his or her job. Hence, contextual factors in this case high-performance HR practices shed light on understanding the circumstances in which job crafting takes place to influence thriving.

Furthermore, the study extends to job crafting and high-performance HR practices research and contributes to the dearth of job crafting and HR practices literature specifically to the academic profession in South Africa. It also raises attention amongst policymakers to consider the value of how high-performance HR practices are perceived in the South African higher education context to facilitate the thriving of academics.

Secondly, by examining the relationship between strengths use and deficit correction, performance and thriving, it was demonstrated why HEIs should care about thriving at work as an instrument for sustainable performance (Fritz, Lam, & Spreitzer, 2011; Spreitzer et al., 2005; Spreitzer & Porath, 2012). No studies were found regarding the relationships among a balanced strengths-and-deficit-based approach, thriving at work, and performance in the context of South African higher education. This study, therefore, provides much-needed clarity that the SUDCO has a positive impact on thriving at work. Furthermore, it contributed to the literature, and addressed this shortcoming in the thriving and strengths-based approach and deficit-based approach research.

Finally, scientific evidence on the relationship between strengths use, psychological need satisfaction, thriving and intention to leave was established. Furthermore, the effects of strengths use and training and development on thriving via psychological need satisfaction was established. This study addressed the research gap by building on self-determination theory (SDT) (Deci & Ryan, 1985, 2000) to test a model of strengths use towards thriving at work and intention to leave.

In conclusion, this study yields contributions to theory and practice equally, by providing further support for the importance of thriving at work and furthermore empirically establishing several previously unmapped personal and contextual factors associated with the experience of thriving at work. It highlighted the purpose of gaining a worthwhile understanding of the nature of thriving at work and its importance in higher education in South Africa.

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