

Assessing the organisational and individual strengths use and deficit improvement among sport coaches

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Mini-dissertation submitted in partial fulfillment of the requirements for the degree *Magister Commercii* in Industrial Psychology at the Potchefstroom Campus of the North-West University

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September 2013



COMMENTS

The reader is reminded of the following:

- The editorial style as well as the references referred to in this mini-dissertation follow the format prescribed by the Publication Manual (6th edition) of the American Psychological Association (APA). This practice is in line with the policy of the Programme in Industrial Psychology of the North-West University (Potchefstroom) to use the APA style in all scientific documents as from January 1999.
- The mini-dissertation is submitted in the form of a research article. The editorial style specified by the South African Journal of Industrial Psychology (which agrees largely with the APA style) is used, but the APA guidelines were followed in constructing the tables.
- The financial assistance of the National Research Foundation (NRF) towards this research is hereby acknowledged. Opinions expressed and conclusions arrived at, are those of the author and are not necessarily to be attributed to the NRF.

DECLARATION

I, Frederick Wilhelm Stander, hereby declare that **Assessing the organisational and individual strengths use and deficit improvement among sport coaches** is my own work and that the views and opinions expressed in this work are my own and that of relevant literature references as shown in the references.

Furthermore, I declare that the contents of this research study will not be submitted for any other qualification at any other tertiary institution.

FREDERICK WILHELM STANDER

MAY 2013

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I, Elsabé Diedericks, hereby declare that I have language edited the following dissertation:
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082 4128 388

7 June 2013

ACKNOWLEDGEMENTS

I would like to express my appreciation to the following individuals who have provided guidance and support throughout the completion of this mini-dissertation.

- My Heavenly Father, the Dream Giver, in Whom I trust and Whose Spirit lives inside me. Thank you Lord; I pray for your blessing and love for the entirety of my life.
- Prof. Karina Mostert for her expert assistance, guidance and enthusiasm towards advancing our field of study. You are a true living leader in Industrial Psychology – your legacy in science will be perpetual and you continue to inspire and captivate.
- My “navigator” and consistent source of unconditional support and love, Vera Anne Argyle. Without you, I am the poorest of men.
- My loving family - father and role model Marius Stander, mother and care giver Annatjie Stander, sister and trusted confidant Elizma “Garas” Stander. You have always lifted me up and love me unconditionally.
- My grandparents, Elleen Stander, Coen and Maria Barkhuizen. You are an enormous part of who I am and you will forever continue to be.
- The participants in this study who dedicated a portion of their time; and the headmasters of the various schools who allowed for such dedication.
- Ian Rothmann junior for the expert assistance in the statistical analysis of this work.
- Dr Elsabé Diedericks for the expert assistance in the language editing of this work.

IN HONOUR OF:

FREDERICK WILHELM “FRIK” STANDER

31/08/1924-28/02/2008

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SUMMARY

Title

Assessing the organisational and individual strengths use and deficit improvement among sport coaches.

Keywords

Positive Psychology; organisational strengths use; organisational deficit improvement; individual strengths use; individual deficit improvement; work engagement; factorial validity; reliability; structural model.

Traditionally, organisations have focused efforts in developing their people towards improving so-called areas of deficiency, identifying the flaws of employees and putting intervention structures in place to rectify and redress these areas. Limited efforts have seen the accentuation of employees' strengths as a means of developing those employees' full potential, as prescribed in the Positive Psychology. In a balanced organisational development approach, both areas of strength and deficit should be developed in order to harness optimum human potential and growth. This balanced approach is critical, as it provides for full spectrum development of the individual and creates opportunity for the attainment of positive work-related outcomes, such as work engagement.

The objective of this research study was to test a structural model of job resources in the form of organisational strengths use and organisational deficit improvement; personal resources in the form of individual strengths use and individual deficit improvement; and work engagement; to relate the conceptualised job- and personal resources to established job- and personal resources in the nomological net and to investigate possible structural paths between job- and personal resources and work engagement. This study was conducted in order to gain more knowledge and a better understanding of the outcomes of following a balanced strengths use and deficit improvement approach (SDBA), both from an organisational (job resource) and individual (personal resource) perspective. Participants in the research were sport coaches from primary and secondary schools.

The Mplus and SPSS programmes were utilised for purposes of statistical analysis. A cross-sectional research approach was used. An availability sample ($N = 364$) of teachers who act as sport coaches in Gauteng, North-West and Free State based schools was used. Competing measurement models were used to confirm factor structures for adapted versions of the Strengths use and Deficit Improvement Questionnaire (SUDIQ), as well as the Utrecht Work Engagement Scale (UWES). These measurement models confirmed a four-factor and one-factor model structure for the adapted versions of the SUDIQ and UWES respectively. After factor structures had been confirmed, reliability of the adapted measures was assessed by means of Cronbach alpha coefficient values.

The relation of the conceptualised job resources of organisational strengths use and organisational deficit improvement to established job resources was assessed by incorporating the job resources of opportunities for learning and independence at work into the study. In the case of the conceptualised personal resources, individual strengths use and individual deficit improvement were related to self-efficacy and self-esteem. This was done in order to theoretically relate these variables in the nomological net of other job resources and personal resources. Subsequently, structural equation modelling was used to investigate the relationship between the job resources of organisational strengths use and organisational deficit improvement, personal resources individual strengths use and individual deficit improvement; and work engagement. Through categorical estimation the research found individual strengths use to be the strongest predictor of work engagement, followed by individual deficit improvement and organisational strengths use. Organisational deficit improvement was proven as a statistically insignificant predictor of work engagement.

After conclusions for the study were drawn, recommendations for the organisation, individual as well as for future research were made.

OPSOMMING

Titel

Assessering van organisatoriese en individuele sterkte-gebruik en tekortkomingverbetering onder sportafrieters.

Sleutelwoorde

Positiewe Sielkunde; organisatoriese sterkte-gebruik; organisatoriese tekortkomingsverbetering; individuele sterkte-gebruik; individuele tekortkomingsverbetering; werksbetrokkenheid; faktoriese geldigheid; betroubaarheid; strukturele model.

Tradisioneel het organisasies in die ontwikkeling van hul mense op die verbetering van sogenaamde areas van tekortkoming gefokus deur die gebreke van werknemers te identifiseer en intervensiestrukture te vestig wat poog om hierdie areas aan te spreek en reg te stel. 'n Beperkte aantal pogings het al gelei tot die beklemtoning van werknemers se sterktes, as 'n manier om die volle potensiaal van daardie werknemers te ontwikkel, soos voorgeskryf deur die Positiewe Sielkunde. In 'n gebalanseerde organisatoriese ontwikkelingsraamwerk moet beide areas van sterkte en tekortkoming ontwikkel word om optimale menslike potensiaal en groei te verseker. Hierdie gebalanseerde benadering is krities, omdat dit geleentheid skep vir die volledige spektrumontwikkeling van die individu en die verkryging van positiewe werksverwante uitkomst, soos werksbetrokkenheid.

Die doel van hierdie navorsingstudie was om strukturele modelle te toets vir werkshulpbronne in die vorm van organisatoriese sterkte-gebruik en organisatoriese tekortkomingsverbetering; vir persoonlike hulpbronne in die vorm van individuele sterkte-gebruik en individuele tekortkomingsverbetering; en vir werksbetrokkenheid; om die gekonseptualiseerde werks- en persoonlike hulpbronne te vergelyk met bevestigde werks- en persoonlike hulpbronne in die nomologiese net, asook om moontlike strukturele paaie tussen die werks- en persoonlike hulpbronne en werksbetrokkenheid te ondersoek. Die studie is onderneem om meer insig en begrip te verkry oor die uitkomst van 'n gebalanseerde sterkte-gebruik en tekortkomingsverbeteringbenadering (SDBA), beide vanuit 'n organisatoriese (werkshulpbron) en individuele (persoonlike hulpbron) perspektief. Deelnemers aan die studie was sportafrieters verbonde aan primêre en sekondêre skole.

Die Mplus en SPSS programme is gebruik vir doeleindes van statistiese analise. 'n Kruisdeursneenavorsingsbenadering is gebruik. 'n Beskikbaarheidsteekproef ($N = 364$) van onderwysers wat optree as sportafrigters in skole in Gauteng, Noordwes en die Vrystaat is gebruik. Kompeterende metingsmodelle is gebruik om faktorstrukture vir aangepaste weergawes van die 'Strengths use and Deficit Improvement Questionnaire' (SUDIQ), asook die 'Utrecht Work Engagement Scale' (UWES) te bevestig. Hierdie metingsmodelle het onderskeidelik 'n vier-faktor- en een-faktorstruktuur vir die aangepaste weergawes van die SUDIQ en UWES bevestig deur gebruik te maak van Bayesian informasiekriteria (BIC). Nadat faktorstrukture bevestig is, is die betroubaarheid van die aangepaste instrumente deur Cronbach alfawaardes geassesseer.

Die verwantskap tussen die gekonseptualiseerde werkhulpbronne van organisatoriese sterkte-gebruik en organisatoriese tekortkomingsverbetering met bevestigde werkhulpbronne is geassesseer deur die werkhulpbronne van geleentheid tot leer en onafhanklikheid by die werk in die studie in te sluit. In die geval van die gekonseptualiseerde persoonlike hulpbronne van individuele sterkte-gebruik en individuele tekortkomingsverbetering, is 'n verwantskap met die reeds bevestigde persoonlike hulpbronne van self-effektiwiteit en selfbeeld getrek. Dit is gedoen om hierdie veranderlikes teoreties met ander werks- en persoonlike hulpbronne in die nomologiese net te vergelyk. Gevolglik is strukturele gelykmakende modellering gebruik om die verhouding tussen werkhulpbronne van organisatoriese sterkte-gebruik en organisatoriese tekortkomingsverbetering, persoonlike hulpbronne van individuele sterkte-gebruik en individuele tekortkomingsverbetering; en werksbetrokkenheid te ondersoek. By kategoriese benadering het die navorsing bevind dat individuele sterkte-gebruik die sterkste voorspeller van werksbetrokkenheid was, gevolg deur individuele tekortkomingsverbetering en organisatoriese sterkte-gebruik. Organisasoriese tekortkomingsverbetering is as 'n statisties, irrelevante voorspeller van werksbetrokkenheid bewys.

Nadat gevolgtrekkings van die studie gemaak is, is voorstelle vir die organisasie, die individu en toekomstige navorsing gemaak.

CHAPTER 1

INTRODUCTION

This mini-dissertation will be investigating the factor structure of adapted versions of the Strengths use and Deficit Improvement Questionnaire (SUDIQ) and the Utrecht Work Engagement Scale (UWES) and will establish the reliability of both these adapted measures. It will then postulate the job resources of organisational strengths use and organisational deficit improvement in relation to established job resources, and the personal resources of individual strengths use and individual deficit improvement to personal resources; as per theoretical classification in the nomological net. Finally, it will investigate the structural paths between the job resources of organisational strengths use and deficit improvement, personal resources of individual strengths use and deficit improvement; and work engagement.

In this chapter the problem statement will be provided, as well as an overview of research already done on Positive Psychology, job resources, personal resources, the strength-based approach, the deficit-based approach and work engagement. An explication of the research questions, research objectives and research hypotheses will be followed by a discussion of the research methodology. Lastly, the layout of the chapters and a summary of this chapter will be provided.

1.1 PROBLEM STATEMENT

Based on the traditional theory that development and growth is fostered through addressing weaknesses, organisations have focused their attention towards rectifying the flaws and weak points of their employees (Buckingham & Clifton, 2001). This is in line with the notion of conventional Psychology that sought to secure insight into the areas for development of human beings and attempted to address these areas (Weiten, 2007). Clifton and Harter (2003) argue that organisations have used various methods to diagnose and remedy these deficits of their people, for example through training and coaching. Within the parameters of employee growth plans, the emphasis has been on securing insight into the restrictions of a particular individual, and implementing measures that seek to rectify such restrictions (Bouskila-Yam & Kluger, 2010; Clifton & Harter, 2003). This has come to be known as the deficit-based

approach, and has been associated with the approach of various organisations in developing their people. As in line with the established vision of Psychology to recognise and cure abnormalities, flaw and deficiency (Hutchinson, Stuart, & Pretorius, 2010), the deficit-based approach has proved valuable and contributory to the advancement of employees within various organisations. To ensure that sufficient levels of performance and growth are achieved from a human resource perspective, the training department of organisations must consistently seek areas in need of improvement and must design interventions to improve those areas of insufficiency (Arthur, Bennet, Edens, & Bell, 2003; Clifton & Harter, 2003). It is ultimately crucial to be realistic around the shortcomings of employees within an organisation, and to remedy these shortcomings as a method of reaching organisational goals (Linley & Harrington, 2006). Training that seeks to rectify the shortcomings of employees enhances the skill set of these individuals, rendering it possible to achieve organisational goals and favourable work-related outcomes (Brown, 2002).

Although the deficit-based approach has proved valuable in traditional people development approaches, a new perspective is currently evolving that emphasises the recognition, accentuation and development of human strengths (Linley, Joseph, Harrington, & Wood, 2006; Seligman & Csikszentmihalyi, 2000; Wood, Linley, Maltby, Kashdan, & Hurling, 2011). This approach can best be described as the strength-based approach and emphasises the importance of advancing human potential and talents (Buckingham & Clifton, 2001). Peterson and Seligman (2004) have described the strength-based approach as an effort towards elevated, sustainable well-being through the identification and implementation of human being character strengths and qualities. Supplementing the deficit-based approach, the strength-based approach aspires to reach optimal functioning through heightening human strengths (Kaiser & White, 2009).

With optimal functioning as a key organisational objective, the topic of recognising and utilising strengths is becoming increasingly relevant (Biswas-Diener, Kashdan, & Minhas, 2011). This represents a clear movement from the singular focus on addressing shortcomings, towards a balanced proclivity where human achievement and talent become part of the process of development (Linley et al., 2006; Wood et al., 2011). Seligman (2002) refers to these achievements and talents as signature strengths; positive personality traits attributed to each individual on the basis of his/her inimitable character. Each person has key positive characteristics, central to his/her core identity to a lesser and greater extent, that, when

activated, act as enablers to achieve enthusiasm, invigorated feelings of self-worth and human development (Compton, 2005). The strength-based approach seeks to emphasise these characteristics, and to build on those aspects that a human being does well (Clifton & Harter, 2003; Compton, 2005; Govindji & Linley, 2007; Linley & Harrington, 2006). It is a theory that is receiving increasing interest in literature and forms part of the broader movement of Positive Psychology, a modern branch of Psychology that essentially focuses on what is right with people opposing to what is wrong with them (Nelson & Cooper, 2007).

The strength-based approach has been directly linked to favourable work-related outcomes in numerous studies. Bouskila-Yam and Kluger (2011) reported a positive relationship between a strength-based approach and organisational motivation and job performance, while Sienstra (2010) has determined a positive correlation between strength-based approaches and task performance amongst employees. Hodges and Clifton (2004) have reported an increase in the subjective perception of productivity, noted by an organisation's employees who underwent a strength-based development program. This has also been proven in the work of Cameron, Mora, Leutscher, and Calarco (2011) in two separate studies, where evidence has been found that those organisations that had made use of positive practices such as the strength-based approach experienced positive organisational outcomes, such as profitability and productivity. Thus, there is rational benefit for organisations in procuring, developing and retaining loyal, productive, and satisfied employees through the strength-based approach, positively affecting the organisational bottom line and contributing to the actualisation of organisational goals (Cameron et al., 2011).

As both the deficit- and strength-based approaches have been associated with favourable work-related outcomes, there is clearly merit in applying both these methods in a consolidated way when developing people. This has been described by Kaiser and White (2009) as the holistic model and seeks to develop the total human being as it utilises strengths and improves those areas of deficit or flaw a person has. This balanced approach is theorised as the strength- and deficit-based approach and is conceptualised as a job resource due to its innate ability to create favourable conditions for the attainment of work-related goals (Peterson & Seligman, 2004). It includes organisational strengths use - the extent to which an organisation is perceived by employees to use their strengths; and organisational deficit improvement - the extent to which an organisation is perceived by its employees as

improving their deficits, as conceptualised job resources (Els, Mostert, Van Woerkom, Rothmann, & Bakker, in process).

The Job Demands-Resources (JD-R) model states that every job has a unique combination of risks and resources that plays a significant role in job-related stress (Bakker & Demerouti, 2007; Bakker, Demerouti, Taris, Schaufeli, & Schreurs, 2003). The model is divided into two broad categories, namely job demands and job resources (Demerouti & Bakker, 2011). Job demands are social, physical, psychological or organisational stresses linked to a particular work role and come at a certain psychological cost as it requires sustained emotional or cognitive struggle from the individual (Bakker & Demerouti, 2007).

Job resources are those resources that enable the attainment of organisational outcomes and goals (Bakker & Demerouti, 2007). It can manifest in various dimensions, such as physical, social or organisational (Bakker & Demerouti, 2008; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). Job resources kindle advancement towards reaching workplace goals, reduce job demands and related physical and psychological costs, and harness growth across various individual and organisational ranks (Xanthopoulou et al., 2009). Examples of job resources that have been empirically established in the literature include opportunities for learning, the perception employees of a particular organisation hold over the extent to which that specific organisation offers opportunity for knowledge expansion and development (Van Veldhoven, Meijman, Broersen, & Fortuin, 2002); and independence at work, the perceived levels of freedom and autonomy employees experience in a specific organisational context (Van Veldhoven et al., 2002).

Organisational strengths use can be conceptualised as a job resource because it creates a climate whereby individuals will immerse their full effort and capacity into their work task (Demerouti & Bakker, 2011); hereby creating a greater chance for attainment of organisational goals (Els et al., in process). Organisational deficit improvement can equally be considered a job resource as it up-skills a particular employee in his/her area of insufficiency, ensuring capacity to perform at a higher level and thus being more equipped to reach work-related goals (Brown, 2002). Linley and Harington (2006) point out that by rectifying areas of flaw in employees, the organisation can grow and develop towards a more favourable state. It is therefore postulated in this research that organisational strengths use and organisational deficit improvement can be considered as job resources.

The JD-R model recently expanded to comprise personal resources as part of job resources (Xanthopoulou et al., 2009). Personal resources can be defined as “aspects of the self that are generally linked to resiliency” (Hobfoll, Johnson, Ennis, & Jackson, 2003, p. 632). Individual characteristics, unique to a specific person, have been linked to personal resources (Hobfoll, 1989). Although personal resources are a highly subjective construct, it is always experienced in relation to a specific domain, for example the working environment (Van den Heuvel, Demerouti, Schaufeli, & Bakker, 2010). Pearlin and Schooler (1978) have found that personal resources assist individuals in successfully negotiating the challenges and stressors in their working environment. Adversity is better managed through the presence of personal resources, making the attainment of personal and work-related goals more likely (Van den Heuvel et al., 2010).

Established personal resources in literature include self-efficacy, the capacity an individual possesses to deal with trials and stressors (Luszczynska, Scholz, & Schwarzer, 2005); and self-esteem, a construct that has been defined by Schmitt and Allik (2005, p. 623) as “one’s overall sense of worthiness as a person”. It has been found that personal resources explain why job resources translate into positive outcomes, such as engagement and job performance (Xanthopoulou et al., 2009). Personal resources can be seen as a mediator between the availability of job resources and positive work-related outcomes such as engagement (Van den Heuvel et al., 2010). This is because personal resources alter the perception of job resources over time (Van den Heuvel et al., 2010). In other words, the individual who, through the utilisation of his/her personal resources, experiences a more fulfilled life through being at a level of subjective well-being (Peterson & Seligman, 2004), is better equipped to optimally utilise the job resources available to him/her and through this will more likely achieve his/her goals.

In the context of this study, individual strengths use and individual deficit improvement are conceptualised as personal resources. Individual strengths use is the self-starting behaviour of an individual to use his/her strengths; while individual deficit improvement is the self-starting behaviour of an individual to improve on his/her deficits (Els et al., in process). Both individual strengths use and individual deficit improvement are personal resources, as they can not only be applied towards a holistic development of the self (Kaiser & White, 2009), but also to create high levels of subjective well-being (Govindji & Linley, 2007); thus making personal and work-related goals more attainable.

The use of strengths and the improvement of deficits, both from an organisational and individual perspective, causes positive affect which arouses high levels of performance through a series of heightened motivation, as per known in the happy-productive worker thesis (Cropanzano & Wright, 2001). Ensuring holistic development by utilising strengths as well as improving on areas of deficiency, subjective well-being can be created that assists the individual in achieving his/her goals (Kaiser & White, 2009). This well-being lays the foundation for further advancement and development in a sequential state described by Frederickson (2002) as the broaden-and-build theory. For this holistic development to be achieved, organisational strengths use, organisational deficit improvement, individual strengths use and individual deficit improvement should occur.

For long no empirical instrument has existed that could assess the extent to which both organisations and individuals use strengths and improve on deficits. This signifies a great need, as various studies have related organisational- and individual strengths use and deficit improvement to positive work-related outcomes and the achievement of goals (Els et al., in process). Van Woerkom has led some work in this area through a Dutch scale that has drawn on the Strength Knowledge Scale (Govindji & Linley, 2007), the Gallup Workplace Audit (Harter, Hayes, & Schmidt, 2002) and the Strengths use Scale (Govindji & Linley, 2007).

However, the need remained for a scale that can assess both strengths use and deficit improvement – on an organisational and individual level. Els et al. (in process) have identified this gap and have introduced an instrument that can measure both organisational and individual strengths use and deficit improvement. The Strengths use and Deficit Improvement Questionnaire (SUDIQ) was developed, following a thorough scientific process that included theoretical conceptualisation (based on the JD-R model), item generation and evaluation, item development, item refinement and item judgement. Through scree plots and eigen values the four factors of the SUDIQ were extracted through exploratory factor analysis during the pilot study for the instrument ($N = 241$). This four-factor structure was confirmed through a process of confirmatory factor analysis in a large sample of 699 employees selected from various industries (Els et al., in process). It was established that the SUDIQ comprised the factors organisational strengths use, organisational deficit improvement, individual strengths use and individual deficit improvement. Through Cronbach alpha coefficients, high levels of reliability were established on all factors of the SUDIQ, including organisational strengths use (0.96), organisational deficit improvement (0.93), individual strengths use

(0.94) and individual deficit improvement (0.94). In order to ensure that the SUDIQ can be of use in a sport coaching specific context, it will be adapted for purposes of this study. It is held that the adapted version of the SUDIQ will still hold a four-factor structure and display sufficient levels of reliability in this study.

It is predicted that organisational strengths use, organisational deficit improvement, individual strengths use and organisational deficit improvement will all predict work engagement. Schaufeli and Bakker (2004, p. 295) defined work engagement as a “positive, fulfilling, work-related state of mind, characterised by vigour, dedication, and absorption”. Vigour refers to continued positive affect for one’s job and work context, visible through cognitive liveliness, physical power and emotional force (Schaufeli, Salanova, González-Romá, & Bakker, 2002). Dedication can be described as feelings of pride and inspiration for one’s job (Schaufeli et al., 2002). Absorption is being interwoven into one’s job, finding it hard to separate oneself from it. Although work engagement traditionally comprises a three-factor structure (Schaufeli & Bakker, 2004), recent studies have proved a two-factor structure for work engagement, arguing that absorption is rather a by-product or result of engagement than a critical factor thereof (Montgomery, Peeters, Schaufeli, & Den Ouden, 2003). It has been stated that absorption is not a critical factor of engagement (Schaufeli & Bakker, 2001). In the context of this study, it is thus also predicted that work engagement will hold a two-factor structure.

Work engagement is a valuable work-related outcome as it creates higher levels of commitment (Demerouti, Bakker, De Jonge, Jansen, & Schaufeli, 2001); predicts motivation (Sonnentag, 2003); and enhances work performance and effectiveness in organisations (Schutte, Toppinen, Kalimo, & Schaufeli, 2000). It is measured with the Utrecht Work Engagement Scale (UWES), a questionnaire that contains 17 items when all three factors of vigour, dedication and absorption are taken into consideration, and 12 items in the case of absorption being discarded (Schaufeli et al., 2002). High levels of reliability have been established for the two-factor model of engagement, with $\alpha = 0.73$ for vigour and $\alpha = 0.85$ for dedication (Mostert, Peeters, & Rost, 2011). For purposes of applicability in the sport coaching environment, the UWES must be adapted to make it sport-specific. This will be done in this study. The premise is that the adapted version of the UWES will still hold a two-factor structure with sufficient levels of reliability that will render it useful for scientific use in a sport coaching environment. It is further predicted that the job resources of

organisational strengths use and organisational deficit improvement, as well as the personal resources of individual strengths use and individual deficit improvement will predict and lead to work engagement in a sport coaching context. This prediction is supported by Xanthopoulou et al. (2009) who have established a direct correlation between the availability of job resources and work engagement.

In South Africa, as in the rest of the world, sport provides a critically important component in the societal landscape. Sport played a major role in the earliest transformation of South African society, providing a vehicle in uniting people from diverse backgrounds (Keim 2003; Swart, Bob, Knot, & Salie, 2011). This has been evident in the legacy left by high profile sporting events hosted in the country, such as the IRB Rugby World Cup (1995), the ICC Cricket World Cup (2003), and most recently, the FIFA Soccer World Cup (2010). Cornellisen, Bob, and Swart (2011) argue that these major events have proven critical in aligning a population that is known for a history of social, political, economic and racial segregation. This is particularly true of post-apartheid South Africa, where the social integration of diverse groups through sport proved a key instrument (Keim, 2003) towards bringing people together through peace and reconciliation, a central government priority at the time. Sport has the ability to build societal cohesion and communal infrastructure (Levermore, 2008). It is a tool in the hands of the leadership structures of South Africa. Participation in sport has been associated with enhanced confidence and self-esteem, empowerment, capacity building, employment gains, and health and environmental improvements (Sanderson, 2001) and can contribute significantly to the improvement of the social, economic and cultural quality of a society (Cornellissen, 2009).

Although sport plays a significant social role, limited empirical work exists in this sector (Levermore & Beacom, 2009). Coalter (2009) points out that policy claims concerning the benefits of sport are predominantly limited to rhetoric observations, with little methodical evidence available that substantiates the role of sport in development programmes. This is also true within the coaching context in sport. Although the profession of sport coaching has generally been associated with high job demands and pressure, little is known about the psychological factors necessary for successful coaching performance (Olusuga, Maynard, Hays, & Butt, 2012). This is disconcerting, considering the fundamental role that sport coaches play in the sport experience and success of athletes. Sport coaches are understood to have a great extent of influence over the athletes they coach (Jones, Potrac, Cushion, &

Ronglan, 2011). In a study, Tufte (2011) found that coaches play a major role in the development of athletes and the experience such athletes have of their sport. This view is supported by Gould, Flett, and Lauer (2012), who have strongly linked the coaching actions of sport coaches to the personal and social development of athletes, particularly at a youth level. The role of the sport coach is not limited to that of tactician and strategist, but encompasses a broader social and personal relevance (Jones et al., 2011). The sport coaching profession is clearly a demanding one as it has been associated with various different roles (Lyle, 2002). It is therefore important to gain an understanding of the variables that can be used as job resources in the sport coach's demanding occupation. The predicting qualities of the job resources of organisational strengths use and organisational deficit improvement; and the personal resources of individual strengths use and individual deficit improvement; to work engagement, will be explored in this study (see Figure 1).

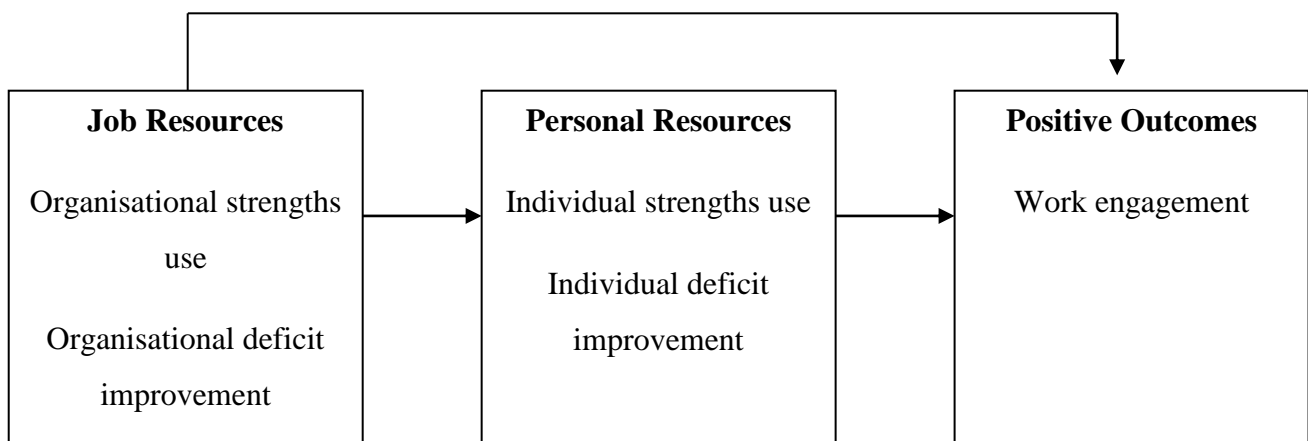


Figure 1. The hypothesised model of organisational strengths use, organisational deficit improvement, individual strengths use, individual deficit improvement and work engagement.

The following research questions can be formulated, considering the above mentioned description of the research problem:

- How are strength-based- and deficit-based approaches and work engagement conceptualised in literature?
- Are the adapted versions of the SUDIQ and UWES valid and reliable for use in a sport coaching environment?

- Can organisational strengths use and organisational deficit improvement be postulated as job resources; and individual strengths use and individual deficit improvement as personal resources, in theoretical relation to established job/personal resources within the nomological net?
- Can a structural model be tested where organisational strengths use, organisational deficit improvement, individual strengths use, and individual deficit improvement predict work engagement in a sample of sport coaches?
- What recommendations can be made for future research and practice?

1.2 RESEARCH OBJECTIVES

The research objectives are divided into a general objective and specific objectives.

1.2.1 General objective

The general objective of this study is to determine whether adapted versions of the Strengths use and Deficit Improvement Questionnaire (SUDIQ) and Utrecht Work Engagement Scale (UWES) are valid and reliable, to determine the relationship of the SUDIQ dimensions in the nomological net and to test a structural model where the four SUDIQ dimensions predict engagement.

1.2.2 Specific objectives

The specific objectives of this research are to:

- Conceptualise a strength-based approach, deficit-based approach and work engagement in literature.
- Determine whether the adapted versions of the SUDIQ and UWES are valid and reliable for use in a sport coaching environment.
- Determine whether organisational strengths use and organisational deficit improvement can be postulated as job resources; and individual strengths use and individual deficit improvement as personal resources, in theoretical relation to established job/personal resources within the nomological net.

- Test a structural model where organisational strengths use, organisational deficit improvement, individual strengths use, and individual deficit improvement predict work engagement in a sample of sport coaches.
- Make recommendation for future research and practice.

1.3 RESEARCH HYPOTHESES

H 1a: The adapted SUDIQ will have a four-factor structure.

H 1b: The adapted SUDIQ will be reliable on all four its factors.

H 2a: The adapted UWES will have a two-factor structure.

H 2b: The adapted UWES will be reliable on both its factors.

H 3a: Organisational strengths use and organisational deficit improvement can be related to job resources.

H 3b: Individual strengths use and individual deficit improvement can be related to personal resources.

H 4a: Organisational strengths use can predict work engagement.

H 4b: Organisational deficit improvement can predict work engagement.

H 5a: Individual strengths use can predict work engagement.

H 5b: Individual deficit improvement can predict work engagement.

1.4 RESEARCH METHOD

The research method consists of two phases, namely a literature review and an empirical investigation. The results are presented in the form of a research article.

1.4.1 Literature review

A full literature review is conducted, individually regarding the different concepts, but also holistically to explain the relationship between the job resources of organisational strengths use and organisational deficit improvement, the personal resource of individual strengths use and individual deficit improvement; and work engagement. Provided also is a literature review of the theoretical work that supports this research, such as the movement of Positive Psychology, the strength-based approach, the deficit-based approach, the broaden-and-build-theory, the happy-productive worker thesis and the job demands–resources model. Relevant academic sources are consulted, including sources of recent nature, with the exception of where the emergence of a concept has to be clarified. The following literature sources are consulted:

- Library catalogues
- Psychology Journals
- Industrial/Organisational Psychology Journals
- Sport Psychology Journals
- Internet Search Engines (EBSCOHOST, Sabinet, Science Direct)
- Textbooks
- Electronic Journals
- Dissertations and theses

1.4.2 Research participants

A representative sample is utilised during this study. It is done according to the need for availability of respondents. Participants range from a variety of backgrounds, pertaining to age, race, gender, professional experience and further relevant demographics. All participants are sport coaches. Considering the need for scientific integrity by having a big representative sample, sport coaches from schools within the Gauteng, North West and Free State provinces are engaged for the study. Considering the fact that, in the South African context, various educators also act as sport coaches, it makes sense to conduct this study throughout various primary and secondary schools in the regions mentioned. A very important prerequisite of participants is to be involved, on a regular basis, as a sport coach at the particular school they

represent. A large sample ($N = 364$) is utilised as to allow for representation of a wide array of sporting codes. This also strengthens the practical significance of the research as it provides a perspective on possible differences in relationships between different sporting codes, race, age, experience and gender. Participants are selected on the basis of accessibility and articulateness (Struwig & Stead, 2007).

1.4.3 Measuring instruments

Biographical questionnaire. A biographical questionnaire is utilised to gain information regarding the biographical characteristics of the participant sport coaches. Important characteristics that are differentiated include the type of sport coached by the participant, gender, race, age group and professional experience. Participants are also required to indicate the level of their coaching experience and whether they coach sport at a primary or secondary school.

Organisational strengths use, organisational deficit improvement, individual strengths use and individual deficit improvement. The SUDIQ, developed by Els et al. (in process), is aimed at attaining the perceived levels of strengths use and deficit development amongst respondents; on an organisational and individual level. The measure comprises 43 items, scored on a 7-point frequency scale, responses ranging from 0 (*almost never*) to 6 (*almost always*). An example item for strengths use on organisational level is: “This organisation makes the most of my talents”. Deficit improvement on organisational level is for example measured by the item: “This organisation expects me to improve the things I am not good at”. An archetypal strengths use item on individual level is “I capitalise on my strengths at work”. Individual deficit improvement is for example represented by: “In my job, I work on my shortcomings”. Cronbach alpha coefficients have been determined at levels of 0.96 for organisational strengths use; 0.93 for organisational deficit improvement; 0.92 for individual strengths use; and 0.92 for individual deficit improvement (Els et al., in process).

As the participants of this study are predominantly teachers who also act in the capacity of sport coaches, it is important to differentiate in their responses to the items contained within the SUDIQ, considering the role in which they respond to the scale items. It is very important that the respondents react to the items in the scale from the capacity of sport coaches, and not educators/teachers. Therefore, the scale is slightly adapted to ensure this understanding and

role clarity in answering items. In the case of the SUDIQ, “This organisation” is replaced by “The school where I coach sport at”. For example, the item that reads “In this organisation performance appraisals address my areas for development” is replaced by “The school at which I coach sport uses performance appraisals to address my areas for development”. This is also the case with regard to the individualised items, for example: “I capitalise on my strengths at work” is replaced by “I capitalise on my strengths when coaching sport”. To ensure that the scientific integrity of the factorial structure of the measure is maintained, factor structure studies are conducted as part of the statistical analysis procedure.

Job Resources. Two job resources, namely that of opportunities for learning and independence at work, are measured by the instrument known as the questionnaire on experience and assessment of work. This Dutch instrument is best known by its abbreviation VBBA (Van Veldhoven, Meijman, Broersen, & Fortuin, 1997). The VBBA includes four items for the opportunities for learning dimension and 11 items for the independence at work dimension. Its responses are scored on a four-point frequency rating scale, ranging from 0 (*never*) to 3 (*always*). An example of an item for opportunities for learning includes “Do you learn new things in your work as a sport coach?” Independence at work includes the example “Do you have freedom in carrying out your work activities as a sport coach?” Van Veldhoven, Meijman, Broersen, and Fortuin (2002) have reported high levels of reliability for this measure in terms of Cronbach alpha coefficients for opportunities for both learning ($\alpha = 0.84$), and for independence at work ($\alpha = 0.90$).

Personal Resources. Self-efficacy is measured by the Generalised Self-Efficacy Scale (Judge, Locke, Durham, & Kluger, 1998). The instrument comprises eight items of which four are reversely scored. The Generalised Self-Efficacy Scale is scored on a five-point frequency scale, ranging in responses from 1 (*strongly disagree*) to 5 (*strongly agree*). An example of an item includes “I can handle the situations that life brings”. Various studies have confirmed the reliability of the scale, including a Polish ($\alpha = 0.90$) and South Korean ($\alpha = 0.86$) study (Luszczynska, Scholz, & Schwarzer, 2005). The Rosenberg Self-Esteem Scale is used to measure self-esteem. Developed by Rosenberg (1965), the scale comprises a five-point frequency scale, ranging in responses from 1 (*strongly disagree*) to 5 (*strongly agree*). An example of an item includes “On the whole I am satisfied with myself”. In a study conducted by Robins, Henden, and Trzesniewski (2001), Cronbach alpha coefficients varying between 0.88 and 0.90 were established across six different studies.

Work engagement. The Utrecht Work Engagement Scale (UWES) measures the level of work engagement experienced by participants. This measure, developed by Schaufeli et al. (2002), consists of 17 items, recorded on a 7-point frequency scale, ranging from 0 (*never*), to 6 (*daily*). It traditionally consists of three scales, namely vigour, dedication and absorption (Schaufeli & Bakker, 2004). Absorption has, however, been established as a less critical element of engagement (Montgomery et al., 2003) and recent studies have supported a two-factor structure for engagement (Mostert, Cronje, & Pienaar, 2006). A typical item for vigour in the UWES is “At my work I feel bursting with energy”. An item for dedication is “I find the work that I do full of meaning and purpose”. From an internal consistency perspective, Cronbach alpha coefficients of the UWES range from 0.68 to 0.91 (Schaufeli et al., 2002). In a separate study performed by Storm and Rothmann (2003), Cronbach alpha coefficients of 0.78 were found for vigour and 0.89 for dedication in the South African context.

As participants’ primary profession is that of educators/teachers who also act in the capacity of sport coaches, it is important to distinguish their feedback from the perspective of sport coaches. It is very important that the respondents react to the items from the capacity of sport coaches, and not as educators/teachers. Therefore, the scale is slightly adapted to foster this understanding and role clarity in answering items. For example, the item “At my work I feel bursting with energy”, is adapted to “While coaching sport, I feel bursting with energy”. To guarantee that the scientific integrity of the factorial structure of the measure was preserved, factor structure analysis is conducted as part of the statistical analysis process.

1.4.4 Research procedure

The researcher contacts the Department of Education to obtain permission to conduct the research. A cover letter accompanies the research, clearly explaining the purpose of the study, the process followed and the practical implications. A confidentiality guarantee of all results is included in the cover letter. As far as possible, the researcher addresses the populations from different schools personally as to explain the research procedure and the aims of the research. This proves imperative as educators do not primarily complete the research instruments in their capacity as teachers, but rather from the perspective of sport coaches. As far as possible, the research is conducted in the morning of a school day as a means to avoid fatigue on the part of the respondents. After the researcher has disseminated the instruments, accompanied by a cover letter and thoroughly explaining the process, he is still available for

participants' questions throughout the process. Participants are reminded that participation is voluntary and that there is no obligation on them to partake in the research process. Responses to the instruments are captured on an answer sheet accompanying the instruments, and the researcher collects these hard copies from the participants after the research process has been completed. Responses are captured on an Excel sheet where after it is made available for analysis by the SPSS and M-Plus programs. Participants can withdraw from the process at any time. Participating schools receive written feedback on the results of the research, in order to assist them with regard to development purposes.

1.4.5 Statistical analysis

Statistical analyses are carried out with the SPSS 16 (2007) and Mplus 6.1 programmes (Muthén & Muthén, 2010). An attempt to answer the relevant research questions is made through utilising all statistical means available. Competing measurement models are tested for purposes of factor structure analysis, utilising the Bayesian Information Criterion (BIC) to compare the models. Confirmatory factor analysis is performed regarding the adapted measuring instruments and their factor structure. Means and standard deviations are determined through descriptive statistics. Reliability of the instruments is assessed by means of Cronbach alpha coefficients, with sufficient levels of correlation set at ≥ 0.70 (Nunnally & Bernstein, 1994). Construct validity, which is utilised to understand whether a instrument measures the theoretical construct it is supposed to (Wolfaard & Roodt, 2006), was applied in this study. Correlations between variables are calculated to investigate possible relationships. This is done by Pearson product moment correlation coefficients. Statistical significance level is set at 95% confidence interval ($p \leq 0.05$). A cut-off point of 0.30 is used to determine practical significance of medium effect, with 0.50 indicating practical significance of large effect (Byrne, 2010). The specification of continuous latent variables in this model investigation is conducted with Mplus. It is expected by the popular maximum likelihood (ML) estimator that the observed variables are measured on a continuous scale. Input type is displayed through a covariance matrix. The latent variables are created by using individual items as indicators. This means that item parcelling is not applied (Bandalos & Finney, 2001). The goodness-of-fit of the models is tested by using the traditional χ^2 statistic, comparative fit index (CFI), Tucker-Lewis index (TLI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR). Little accord exists in literature on the cut-off values for adequate fit, however, conformist guidelines are

followed for this study whereby fit is considered sufficient if CFI and TLI values are larger than 0.90 (Byrne, 2010). For purposes of good fit, a RMSEA value of 0.05 or less must be observed and values between 0.08 and 0.05 represent a moderately good model fit (Browne & Cudeck, 1993). Hu and Bentler (1999) have stated that the SRMR value should be smaller than 0.05.

1.4.6 Ethical considerations

Participants receive a clear briefing pertaining to all relevant aspects of the research project, including the reasons for it and the methods conducted. They have the opportunity to raise questions and/or concerns before participating. The confidential, anonymous and voluntary nature of the project is emphasized; and a consent form is signed by participants communicating to them that the information obtained from the project is utilised for research purposes only. Feedback of the results is communicated to the management team of the school and in a simplified form to participants (through a means they understand). The researcher conducts the research in a manner that is professional and in a way that does not threaten the well-being of participants. This is ensured through conducting the research under the competent leadership and supervision of an experienced researcher (De Vos, Strydom, Fouché, & Delpont, 2005).

1.5 OVERVIEW OF THE CHAPTERS

In Chapter 2 the findings of the research objectives will be discussed in the form of a research article. Chapter 3 deals with the conclusions, limitations and recommendations of this research study.

1.6 CHAPTER SUMMARY

In this chapter the problem statement, research objectives and research hypotheses were stated. The measuring instruments and the research method used in the study were also explained, followed by a brief overview of the chapters.

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CHAPTER 2

RESEARCH ARTICLE

ASSESSING THE ORGANISATIONAL AND INDIVIDUAL STRENGTHS USE AND DEFICIT IMPROVEMENT AMONG SPORT COACHES

ABSTRACT

Orientation: Traditionally organisations have focused on rectifying areas of deficit in developing people. The modern perspective advocates a balanced approach where both areas of deficit and strengths are accentuated. This could lead to positive work-related outcomes, such as engagement.

Research purpose: This study had three objectives: 1) to determine whether adapted versions of the Strengths use and Deficit Improvement Questionnaire (SUDIQ) and Utrecht Work Engagement Scale (UWES) are valid and reliable; 2) to determine the relationship of the SUDIQ dimensions in the nomological net; and 3) to test a structural model where the four SUDIQ dimensions predict engagement.

Motivation for the study: To gain more knowledge and a better understanding of the outcomes of following a balanced strength- and deficit-based approach within a sport coaching context.

Research design, approach and method: A cross-sectional research approach was used. An availability sample ($N = 364$) of teachers occupying roles as sport coaches from various schools across three provinces in South Africa was used. Structural equation modelling was used to test the factor structures and the structural model.

Main findings: The results indicated a valid factor structure for the adapted SUDIQ and UWES, comprising a four- and one-factor structure respectively. Relationships between the SUDIQ dimensions and job/personal resources were as expected – positive and significant. In the structural model, individual strengths use was the strongest predictor of engagement. Individual deficit improvement and organisational strengths use were also significant predictors. Organisational deficit improvement did not significantly predict engagement.

Practical/managerial implications: Evidence suggests the adapted SUDIQ and UWES can be utilised effectively in a sport coaching environment. The importance of using individual strengths and developing deficits in predicting engagement was proved. Organisational strengths use is also important in managing engagement levels of sport coaches.

Contribution/value-add: This study holds empirical value through proving adapted measures that are reliable and valid for use in a sport coaching environment. It substantiates the positive outcomes that can be gained by following a combined strength- and deficit-based approach.

Key words: Positive Psychology, organisational strengths use, organisational deficit improvement, individual strengths use, individual deficit improvement, work engagement, factorial validity, reliability, structural model.

INTRODUCTION

In traditional organisational and people development approaches, the majority of organisations have focused their attention towards the improvement of employee deficits. These organisations have sought to secure insight into the so-called flaws and weak points of their people, as a means of identifying areas of insufficiency that need to be redressed and rectified (Buckingham & Clifton, 2001). The training and development functions of major corporations have long been sanctioned to design and convene intercessions to resolve areas of development identified in the organisation as a means of ensuring greater levels of performance and growth (Clifton & Harter, 2003). From an organisational perspective, this approach has come to be known as the deficit-based approach (DBA) and it has served assiduously in addressing key areas of shortage within organisations and individuals as a means of attaining goals and facilitating growth. Linley and Harrington (2006) have remarked that it is ultimately essential to be realistic around the shortcomings of an individual or organisation and addressing these shortcomings in order to move towards a more favourable or desired state.

Although the DBA has long served organisational and individual development, a modern perspective has emerged that promotes the idea of a more balanced predilection on which the strengths and potential of human beings are also focused (Linley, Joseph, Harrington, & Wood, 2006; Seligman & Csikszentmihalyi, 2000; Wood, Linley, Maltby, Kashdan, & Hurling, 2011). Known as the strength-based approach (SBA), this predilection has of aim the accentuation of talents and virtues of people (Buckingham & Clifton, 2001). Strengths can be described as positive personality traits, inimitable to every person (Seligman, 2002). Peterson and Seligman (2004) have described the SBA as an exertion towards sustainable well-being through the identification and execution of human being character strengths and qualities. The SBA is a key enabler of optimal human functioning (Kaiser & White, 2009). This approach is very much in line with the modern field of Positive Psychology, a movement that has championed for recognition and development of positive emotions, traits and characteristics; as opposed to the traditional Psychology focus that so rigorously sought to rectify human abnormality, deficiency and flaw (Cravens, Oliver, & Stewart, 2010).

Both the DBA and SBA have been associated with positive outcomes. For example, Linley and Harrington (2006) have established that the absence of a DBA will render an organisation unable to move towards a more desirable state and achieve organisational goals. In the case of SBA, Wood et al. (2011) have found optimal development possible only when human potential and strengths are also part of the equation. Bouskila-Yam and Kluger (2010) described a positive relationship between adopting a SBA and organisational motivation and job performance, while Sienstra (2010) has indicated that a positive relationship exists between following a SBA and task performance amongst employees.

The importance of achieving high levels of task performance has long been part of the sport coaching profession; a trade that is characterised by severe levels of pressure and demands (Olusuga, Maynard, Hays, & Butt, 2012). For the sport coach to be successful, he/she must be trained and developed to fulfil multiple roles (Lyle, 2002). This calls for an approach of totalised development, focused on the coach's strengths and areas of deficit, in order for optimum functioning to become possible (Wood et al., 2011). To be successful in the demanding and stressful environment of sport coaching (Gould, Guinan, Greenleaf, & Chung, 2002), a balanced strength- and deficit-based development approach can be very useful.

In general, little empirical work has been done with regard to measuring the extent of both strengths use and deficit improvement, from an organisational or individual perspective. The critical need for providing such measures has been addressed by Els, Mostert, Van Woerkom, Rothmann and Bakker (in process), who have designed the Strengths use and Deficit Improvement Questionnaire (SUDIQ) as a measure that can assess the extent of organisational strengths use (OSU), organisational deficit improvement (ODI), individual strengths use (ISU) and individual deficit improvement (IDI). In this study, this scale will be extended in an adapted version to the sport sector, an industry that will benefit largely by extended empirical work (Levermore & Beacom, 2009). It will be supplemented by an adapted version of the Utrecht Work Engagement Scale (UWES) to provide two adapted measures that can validly and reliably measure well-being related constructs in the sport sector. This will hold significant practical value, particularly in the South African context, where sport has throughout history played a significant role as social catalyst in uniting segregated communities and transforming the country (Keim, 2003; Swart, Bob, Knot, & Salie, 2011).

As is the case with regard to empirical work in measuring the extent of a balanced approach (i.e. including both strengths and deficits), both from an organisational and personal perspective, limited work has thus far investigated structural paths in facilitating desired outcomes. In this study, the strength- and deficit approaches' potential role in creating work engagement will be explored. These structural paths will be investigated in the context of a sport environment, and more specifically the context of sport coaching.

The objectives of this study are therefore 1) to conceptualise a strength-based approach, deficit-based approach and work engagement in the literature; 2) to determine the factorial validity and reliability of the adapted versions of the Strengths use and Deficit Improvement Questionnaire (SUDIQ) and the Utrecht Work Engagement Scale (UWES) in a sport coaching environment; 3) to determine whether organisational strength use and organisational deficit improvement can be postulated as job resources; and individual strength use and individual deficit improvement as personal resources, in theoretical relation to established job/personal resources within the nomological net; 4) to test a structural model where organisational strengths use, organisational deficit improvement, individual strengths use, and individual deficit improvement predict work engagement in a sample of sport coaches; and 5) make recommendation for future research and practice

LITERATURE REVIEW

Organisational strengths use and organisational deficit improvement as job resources

The Job Demands-Resources (JD-R) model is a theoretical model describing that every job has its own unique set of risk and resource factors that play a major role in job-related stress (Bakker & Demerouti, 2007; Bakker, Demerouti, Taris, Schaufeli, & Schreurs, 2003). Demerouti and Bakker (2011) have classified these factors into two broad categories, namely that of job demands and job resources. Job demands are those psychological, social, organisational or physical strains associated with a specific job role that requires a sustained emotional or cognitive effort and is associated in some manner to psychological cost (Bakker & Demerouti, 2007). Job resources include those occupational resources that facilitate the attainment of organisational outcomes and goals (Bakker & Demerouti, 2007). Job resources can manifest in various dimensions, including physical, social, or organisational resources

(Bakker & Demerouti, 2008; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). Job resources constitute those capitals that stimulate advancement towards reaching workplace goals, condense job demands and related physiological and psychological costs, and harness advancement and growth across various individual and organisational levels (Xanthopoulou et al., 2009). Job resources also enable aspects such as motivation, well-being and work engagement amongst employees (Hakanen, Perhoniemi, & Toppinen-Tanner, 2008). The JD-R model can be adapted and applied to various job roles, industries and occupations (Demerouti & Bakker, 2011).

Organisational strengths use refers to the employees' perception of the extent to which the practices, policies and procedures of a specific organisation allow for the utilisation of their areas of strength (Els et al., in process). On the other hand, organisational deficit improvement can be described as employees' perception of the extent to which a specific organisation will provide for structures, programmes and policies to improve said employees' areas of deficit or flaw (Els et al., in process).

Organisational strengths use can be conceptualised as a job resource because it facilitates extrinsic motivation amongst employees and creates a climate where individuals will invest their full effort and available capacity to ensure accomplishment of the work task (Demerouti & Bakker, 2011; Els et al., in process). Organisational strengths use has been proven valuable to create several positive work-related outcomes, such as higher work engagement (Harter, Hayes, & Schmidt, 2002), reduced employee turnover (Clifton & Harter, 2003; Stefanyszyn, 2007), and increased job satisfaction (Peterson, Stephens, Park, Lee, & Seligman, 2009). Bouskila-Yam and Kluger (2011) established a correlation between organisational strengths use and increased levels of job performance and motivation of employees. In two separate studies, Cameron, Mora, Leutscher, and Calarco (2011) have found the result of organisational strengths use to be higher levels of productivity and profitability.

Organisational deficit improvement has been particularly evident in the training and development functions of organisations, where the identification of employees' areas of flaw has formed the basis of the company's training needs (Arthur, Bennett, Edens, & Bell, 2003). Brown (2002) has argued that organisational deficit improvement is aimed at bridging the gap between incapacity to perform and enhanced skills and capabilities to ensure the organisation reaches its goals. Linley, Woolston, and Biswas-Diener (2009) mention that by

not sufficiently addressing areas of insufficiency or deficit in an organisation, these deficiencies can lead to learned behaviours that are very difficult to alter and derail the organisation's effort to reach desired objectives. This sentiment is shared by Linley and Harrington (2006), who describe the rectification of flaws as central in moving the organisation from one point towards a more desirable state. To enhance organisational performance and stimulate growth, areas of deficit must be a central focus in the training and development interventions designed by organisations (Clifton & Harter, 2003).

Clearly, both organisational strengths use and -deficit improvement are important factors towards reaching organisational goals, mitigating demands in the workplace and stimulating employee development and growth; the prerequisite criteria for job resources (Xanthopoulou et al., 2009). They are therefore classified as job resources in the context of this study.

Individual strengths use and individual deficit improvement as personal resources

The JD-R model recently expanded to include personal resources as part of its compilation of job resources (Xanthopoulou et al., 2009). Personal resources include a wide definition, and have been described as “aspects of the self that are generally linked to resiliency” (Hobfoll, Johnson, Ennis, & Jackson, 2003, p. 632). Clearly, the connotation to “personal” implies an individual characteristic (Hobfoll, 1989). The individual implication considered, personal resources are, however, still relevant to the working environment (Van den Heuvel, Demerouti, Schaufeli, & Bakker, 2010) and can therefore be described as those aspects that assist individuals in dealing with challenges and stressors within their particular working environment (Pearlin & Schooler, 1978). It proves useful in dealing with adverse situations and creating more favourable circumstances for the attainment of personal goals (Van den Heuvel et al., 2010).

From the perspective of individual strengths use and deficit improvement, two dimensions must be distinguished. Individual strengths use is defined as the individual's self-starting behaviour to use his/her strengths, potential and virtues in the workplace, whilst individual deficit improvement describes the individual's self-starting behaviour towards improving areas of deficit, weakness or flaw (Els et al., in process). Both individual strengths use and individual deficit improvement could greatly serve as personal resources, as they can be utilised towards holistic development of the self (Kaiser & White, 2009), as well as towards

the fostering of high levels of subjective well-being (Govindji & Linley, 2007), making personal and work-related goals more attainable. Individual strengths use and individual deficit improvement will provide a person with greater control over the demands and challenges associated with his/her job, equipping that person to achieve his/her work-related objectives. Therefore, individual strengths use and deficit improvement could be classified as personal resources.

Development and validation of the Strengths use and Deficit Improvement Questionnaire (SUDIQ)

The evidently positive impact of strength usage on subjective well-being and organisational attainment of goals has led to various strength identification instruments being developed, including the “Values in Action” (VIA) (Peterson & Seligman, 2004), the Clifton StrengthFinder 2.0 (Rath, 2002), and the Realise 2 (Linley, Willars, & Biswas-Diener, 2010). Although these instruments prove valuable in assessing and identifying human strengths, little empirical work exists on what has been described by Clifton and Harter (2003) as the process movement towards creation of self-awareness and actual utilisation of strengths. It must be possible to assess the actual extent to which organisations and individuals use their strengths. Moreover, the availability of measures that balance this with the assessment of the extent to which organisations and individuals can improve deficits proves a further important priority.

No measures existed that could assess the extent to which organisations and individuals use strengths and improve deficits. This represents a major need as it has been proven that both strengths use and deficit improvement, from an organisational and individual perspective, can create favourable outcomes and act as resources to achieve work-related goals (Els et al., in process). Some effort in this direction has been led by the Dutch scale developed by Van Woerkom that drew from the Strength Knowledge Scale (Govindji & Linley, 2007), the Gallup Workplace Audit (Harter, Hayes, & Schmidt, 2002), and the Strengths use Scale (Govindji & Linley, 2007). A major priority in empirical science, however, has remained to be able to measure the extent to which organisations develop employees’ strengths as well as the individual’s internal ability to develop and capitalise on strengths, on the one hand; but also measuring the extent to which organisations and individuals have capacity for the improvement of deficits.

This research gap has been addressed by Els, Mostert, Van Woerkom, Rothmann, and Bakker (in process) through the development of a scale that assesses the degree to which individuals experience the utilisation of their talents and strengths not only by the organisation in which they function, but also on individual level. Furthermore, the scale developed also provides for the assessment of perceived levels of improvement of deficits, on an organisational and individual level. This is fundamentally important, as it enables what Peterson and Seligman (2004) describe as optimum development by addressing both areas of strength and deficit in a balanced approach.

The scale, known as the Strengths use and Deficit Improvement Questionnaire (SUDIQ), was developed through a rigorous process, including construct conceptualisation based on the JD-R model of job and personal resources, item generation and evaluation, item development, item refinement and item judgement. The four factors of the questionnaire were extracted through a scree plot and eigen values in an exploratory factor analysis during the pilot study ($N = 241$), and a four-factor structure was confirmed with confirmatory factor analysis in a sample of 699 employees in a variety of organisational settings (Els et al., in process). The four-factor structure comprised of organisational strengths use, organisational deficit improvement, individual strengths use and individual deficit improvement. Very good reliability has been reported by Els et al. (in process), pertaining to the four factors, through Cronbach alpha coefficients. These include organisational strengths use, $\alpha = 0.96$; organisational deficit improvement, $\alpha = 0.93$; individual strengths use, $\alpha = 0.94$ and individual deficit improvement, $\alpha = 0.94$.

For the purpose of this study, an adapted version of the SUDIQ was used to make it specific for a sport coaching context. The hypothesis is that the adapted SUDIQ will hold a valid four-factor structure, as was proven in the research of Els et al. (in process). These factors will include organisational strengths use, organisational deficit improvement, individual strengths use and individual deficit improvement (*Hypothesis 1a*). Following this, it is predicted that all four dimensions will be reliable (*Hypothesis 1b*). These results will render the adapted SUDIQ an instrument that can be used in the sport coaching domain with high levels of scientific integrity.

Work engagement

Work engagement has been defined by Schaufeli and Bakker (2004, p. 295) as a “positive, fulfilling, work-related state of mind, characterised by vigour, dedication, and absorption”. Vigour can be witnessed in displays of on-going positive affections for elements and dimensions in one’s work context, being visible in cognitive vivacity, physical power and emotional force (Schaufeli, Salanova, González-Romá, & Bakker, 2002). Inspiration and pride for one’s job constitute dedication (Schaufeli et al., 2002). Absorption is theorised as being happily intertwined in one’s work and struggling to detach oneself from it (Schaufeli & Bakker, 2004; Schaufeli et al., 2002). Recently, several studies only include the ‘core dimensions’ of engagement, namely vigour and dedication. This is mainly because absorption has recently been conceptualised as a consistent state of “flow” (Csikszentmihalyi & Rathunde, 1993) that emerges as a result or consequence of work engagement, rather than a factor thereof (Montgomery, Peeters, Schaufeli, & Den Ouden, 2003). It is also seen as a less central component of work engagement (Schaufeli & Bakker, 2001). Based on these arguments, only vigour and dedication, the ‘core’ dimensions of engagement will be included in this study. Schutte, Toppinen, Kalimo, and Schaufeli (2000) have described engagement as a crucial stimulator of work performance, confidence and effectiveness within the work domain. Work engagement leads to higher levels of commitment (Demerouti, Bakker, De Jonge, Jansen, & Schaufeli, 2001) and has been a predictor of higher motivation to learn amongst employees (Sonnentag, 2003). It is clearly a sought after construct in any organisational setting.

Work engagement is measured with the Utrecht Work Engagement Scale (UWES), a 17-item instrument that assesses the three factors of vigour, dedication and absorption (Schaufeli et al., 2002). Cronbach alpha coefficients for the measure have varied between 0.78 and 0.89 (Schaufeli et al., 2002). Various factor structures for the UWES have been established, including the traditional three-factor structure (Schaufeli & Bakker, 2004), a two-factor structure consisting of vigour and dedication (Demerouti, Mostert, & Bakker, 2010; Mostert, Cronje, & Pienaar, 2006); as well as a one-factor structure. Recent studies have favoured the two-factor conceptualisation of work engagement (Montgomery et al., 2003; Schaufeli & Bakker, 2001). Reliability of the two factor model has been sufficient, with Cronbach alpha values of 0.73 for vigour and 0.85 for dedication (Mostert, Peeters, & Rost, 2011). This was

also proven in a study by Mostert et al. (2006), who established Cronbach alpha values of 0.74 for vigour and 0.84 for dedication.

For purposes of this study, an adapted version of the UWES was utilised to ensure that the measure is specific for the sport coaching context. Although the measure was adapted, the hypothesis holds that the UWES will have a valid two-factor structure (consisting of vigour and dedication), as based on the theoretical underpinnings of the instrument and previous findings (Montgomery et al., 2003; Mostert et al., 2011; Schaufeli & Bakker, 2001). This proposition represents *Hypothesis 2a*. Supporting the work of Schaufeli et al. (2002), it is further postulated that the adapted version of the UWES used for this study will display sufficient levels of reliability (*Hypothesis 2b*). It will thus be usable in the South African sport coaching context in a manner that holds scientific integrity.

Position of the job and personal resources in the nomological net

For purposes of theoretical classification, the conceptualisation of organisational strengths use and organisational deficit improvement as job resources; as well as individual strengths use and individual deficit improvement as personal resources; must be structured within and compared to other similarly postulated constructs in a framework known as the nomological net. The nomological net describes a collection of theoretically overlapping and related concepts, and refers to the interrelationship between such constructs (Westen & Rosenthal, 2003). From a statistical perspective, it forms part of construct validity.

For purposes of job resources, the constructs included for relation in the nomological net in this study included opportunities for learning and independence at work. These constructs have been proven as job resources in various studies. Opportunities for learning is the perception of the individual of the extent to which his/her job offers chances for development and learning (Van Veldhoven, Meijman, Broersen, & Fortuin, 2002). Independence at work describes the employee's perception of the extent to which he/she has autonomy and freedom in determining his/her own work tasks, activities and actions (Van Veldhoven et al., 2002). In the context of this study, the hypothesis is that a moderate relation will exist between organisational strengths use, organisational deficit improvement and both opportunities for learning and independence at work, substantiating its classification as job resources (*Hypothesis 3a*).

From the perspective of personal resources, individual strengths use and individual deficit improvement were considered based on their relation to two distinguished personal resources, namely that of self-efficacy and self-esteem. Generalised self-efficacy is the belief an individual holds over his/her innate ability to deal with a broad range of challenges and stressors (Luszczynska, Scholz, & Schwarzer, 2005). It has been described by Judge and Bono (2001, p. 80) as “one’s fundamental ability to cope, perform and be successful”. Schmitt and Allik (2005, p. 623) describe self-esteem as “one’s overall sense of worthiness as a person”. It is hypothesised that both the individual strengths use and individual deficit improvement will display moderate correlations with these established personal resources (*Hypothesis 3b*). The relationship with work engagement in the nomological net will be discussed next. This relationship will be tested more rigorously with structural equation modelling.

Structural paths between the SDBA and work engagement

Studies have found the availability of job resources to be a strong predictor of work engagement (Bakker & Demerouti, 2007; Xanthopoulou et al., 2009). Considering the fact that organisational strengths use and organisational deficit improvement are defined within the theoretical parameters of job resources, it can reasonably be predicted that these constructs can also predict higher levels of work engagement.

A study by Linley and Harrington (2006) found a direct relation between organisational strengths use and work engagement in an organisation. Possible theoretical contextual explanations for this phenomenon may include the happy-productive worker thesis, a theory that holds that the development of employee strengths will harness positive affect which in turn will kindle high levels of performance through a series of heightened mechanisms of motivation (Cropanzano & Wright, 2001). Furthermore, the broaden-and-build theory of Frederickson (2002) infers that one good experience lays the substance for further advancements towards the optimum development of people. Govindji and Linley (2007) found that organisations that accentuate and develop the strengths of their employees allow for these employees to expand their perspectives, be more happy and, ultimately, more engaged in their work. Luthans and Youssef (2007) have, however, also elaborated on the importance of balancing organisational strengths use with deficit improvement in a realistic

approach that seeks the development of the total individual. It is therefore proposed that organisational strengths use is a positive and significant predictor of work engagement (*Hypothesis 4a*) and that organisational deficit improvement is also a positive and significant predictor of work engagement (*Hypothesis 4b*).

Personal resources are a theoretical extension of job resources (Xanthopoulou et al., 2009) and considering the positive relationship that exists between job resources and work engagement, it can reasonably be hypothesised that the personal resources of individual strengths use and individual deficit improvement will also affect work engagement. This is because the individual who possesses individual resources will be more capable of accumulating and utilising job resources effectively, translating such resources into favourable outcomes such as engagement (Hobfoll, 2002; Xanthopoulou et al., 2009). Thus, a structural path between individual strengths use and work engagement is proposed (*Hypothesis 5a*), as well as a structural path between individual deficit improvement and work engagement (*Hypothesis 5b*).

RESEARCH DESIGN

The research approach

This study is quantitative in nature, following a cross-sectional research approach. A cross-sectional method examines a number of responses of various participants at one point in time (Salkind, 2009). The study is both descriptive and exploratory.

The research method

Research participants

For the purpose of the study, a sample of teachers who fulfil roles as sport coaches at their various schools was used. A representative sample of sport coaches, working at primary and secondary schools across three provinces in South Africa (Gauteng, Free State and North West), was gathered ($N = 364$). The sample comprised a diverse collection of biographical characteristics pertaining to such elements as gender, race, level of education and level of

sport coached. Articulateness and accessibility was a big consideration in engaging participants in the study (Struwig & Stead, 2007). The large sample of 364 coaches were drawn from across three provinces and from various sporting codes, ensuring a diverse representation of the participants. In the South African education system, teachers often fulfil dual roles as both educators and sport coaches. These teachers form part of a well defined and controlled structure within the Education Department and it therefore made pragmatic sense to position their relation to organisational factors measured in this research as their appointed roles in the schools at which they work. The characteristics of the participants are displayed in Table 1.

Table 1

Characteristics of the Participants (N = 364)

Item	Category	Frequency	Percentage
Home Language	Afrikaans	337	92.6
	English	19	5.2
	Sesotho	8	2.2
Gender	Male	139	38.2
	Female	225	61.8
Age Group	20 – 30 years	108	29.7
	31 – 40 years	56	15.4
	41 – 50 years	101	27.7
	51 – 60 years	77	21.2
	61-70 years	17	4.7
Race	Black	9	2.5
	White	355	97.5
Education	Diploma	121	33.2
	Degree	150	41.2
	Post-graduate degree	87	23.9
School Coached	Primary School	156	42.9
	Secondary School	208	58.8
Level of Coaching	Age group level	123	33.8
	First Team	133	36.5
	Provincial	91	25
	National	17	4.7

Note. Where percentages do not sum to a 100, it is due to missing values

As evident above, the sample comprised of 225 (61.8%) female and 139 (38.2%) male respondents. The predominant home language of participants was Afrikaans, 337 (92.6%). This was followed by English, spoken by 19 (5.2%) participants; and Sesotho, spoken by 8 (2.2%) of the participants. The sample included 355 (97.5%) white participants and 9 (2.5%) black participants. The majority of respondents were in the age groups 20 – 30 years (29.7%) and 41 – 50 years (27.7%). From an educational perspective, 148 (40.7%) participants were in possession of at least a university degree, whilst 122 (33.5%) held at least a diploma; 88 (24.2%) participants were in possession of a post-graduate university qualification when the study was conducted. Of the total sample, 150 (41.2%) participants were actively coaching at a primary school and 214 (58.8%) at secondary schools. The level of coaching that most

participants had exposure to was school first team level (133 participants at 36.5% of the sample) and age group level (123 participants at 33.8% of the sample). Only 91 (25%) participants have had exposure to coaching at a provincial sport level; and only 17 (4.7%) of participants have coached sport at a national level. The predominant types of sporting codes being coached were that of athletics (239 participants), netball (146), rugby (106) and hockey (97). However, participants in most cases coached a multitude of sporting codes as opposed to just one single code.

Measuring instrument(s)

Biographical questionnaire. A biographical questionnaire was utilised to pertain information about the biographical characteristics of the participant sport coaches. Important characteristics that were differentiated included the type of sport coached by the participant, gender, race, age group and professional experience. Participants were also asked to indicate the level of their coaching experience and at what school they coached, i.e. high school or primary school.

Organisational strengths use, organisational deficit improvement, individual strengths use and individual deficit improvement. The SUDIQ, developed by Els et al. (in process) is aimed at attaining the perceived levels of strengths use and deficit development amongst respondents; on an organisational and individual level. The measure consists of 43 items, scored on a 7-point frequency scale, responses ranging from 0 (*almost never*) to 6 (*almost always*). An example item for strengths use on organisational level is: “This organisation makes the most of my talents”. Deficit improvement on organisational level is for example measured by the item “This organisation expects me to improve the things I am not good at”. A typical strengths use item on individual level is “I capitalise on my strengths at work”. On an individual level, deficit improvement is for example represented by: “In my job, I work on my shortcomings”. Cronbach alpha coefficients have been determined at levels of 0.96 for organisational strengths use, 0.93 for organisational deficit improvement, 0.92 for individual strengths use and 0.92 for individual deficit improvement (Els et al., in process).

As the participants of this study were predominantly from the educational sector, it was important to distinguish in their responses the items contained within the SUDIQ, pertaining to the role in which they responded to the scale items. It was imperative that the respondents

react to the items in the scale from the capacity of sport coaches, and not as educators/teachers. Therefore, the scale was slightly adapted to foster this understanding and role clarity in answering items. In the case of the SUDIQ, “This organisation” was replaced by “The school at which I coach sport”. For example, the item that reads “In this organisation performance appraisals address my areas for development”, was replaced by “The school where I coach sport uses performance appraisals to address my areas for development”. This is also the case with regard to the individualised items, for example: “I capitalise on my strengths at work”, was replaced by “I capitalise on my strengths when coaching sport”. To ensure that the scientific integrity of the factorial structure of the measure was maintained, factor structure studies were conducted as part of the statistical analysis process.

Job Resources. Two job resources, namely that of opportunities for learning and independence at work, were measured through the questionnaire on experience and assessment of work. This instrument, developed in the Netherlands, is best known by its abbreviation VBBA (Van Veldhoven et al., 1997). The VBBA comprises four items for the opportunities for learning dimension and 11 items for the independence at work dimension. Its responses are scored on a four-point frequency rating scale, ranging from 0 (*never*) to 3 (*always*). An example of an item for opportunities for learning included “Do you learn new things in your work as a sport coach?” Independence at work included the example “Do you have freedom in carrying out your work activities as a sport coach?” Van Veldhoven et al. (2002) have reported sufficient Cronbach alpha coefficients for both opportunities for learning ($\alpha = 0.84$), and for independence at work ($\alpha = 0.90$).

Personal Resources. Self-efficacy was measured by using the Generalised Self-Efficacy Scale (Judge, Locke, Durham, & Kluger, 1998). The instrument comprises eight items, of which four are reversely scored. The Generalised Self-Efficacy Scale is scored on a five-point frequency scale, ranging in responses from 1 (*strongly disagree*) to 5 (*strongly agree*). An example of an item includes “I can handle the situations that life brings”. Various studies have confirmed the reliability of the scale, including a Polish ($\alpha = 0.90$) and South Korean ($\alpha = 0.86$) study (Luszczynska et al., 2005). The Rosenberg Self-Esteem Scale was utilised to measure self-esteem. Developed by Rosenberg (1965), the scale comprises a five-point frequency scale, ranging in responses from 1 (*strongly disagree*) to 5 (*strongly agree*). An example of an item includes “On the whole I am satisfied with myself”. In a study conducted by Robins, Henden, and Trzesniewski (2001), Cronbach alpha coefficients varying between

0.88 and 0.90 were found across six separate measurements. During the factor analysis of these two instruments in this particular study, the reversely scored items loaded together on one factor and did not prove to have sufficient reliability. They were therefore discarded for purposes of this study amongst sport coaches.

Work engagement. The levels of work engagement of participants were measured by the Utrecht Work Engagement Scale (UWES). This measure, developed by Schaufeli et al. (2002), consists of 17 items, scored on a 7-point frequency scale, ranging from 0 (*never*), to 6 (*daily*). It is conceptualised through measuring three scales, namely vigour, dedication and absorption (Schaufeli & Bakker, 2004). A typical item for vigour in the UWES is “At my work I feel bursting with energy”. An item for dedication is “I find the work that I do full of meaning and purpose”. From an internal consistency perspective, Cronbach alpha coefficients of the UWES range from 0.68 to 0.91 (Schaufeli et al., 2002). In a separate study performed by Storm and Rothmann (2003), Cronbach alpha coefficients of 0.78 were found for vigour and 0.89 for dedication in the South African context.

As participants’ primary profession was that of educators, it was important to distinguish their feedback from the perspective of sport coaches. It is imperative that the respondents react to the items from the capacity of sport coaches, and not as educators/teachers. Therefore, the scale was slightly adapted to foster this understanding and for ensuring role clarity in answering items. For example, the item “At my work I feel bursting with energy”, was adapted to “While coaching sport, I feel bursting with energy”. To ensure that the scientific integrity of the factorial structure of the measure was maintained, a factor structure analysis was conducted as part of the statistical analysis process.

Research procedure

Before engaging the participants for purposes of the study, permission was gained from the headmasters of the various schools that participated in the study. Schools across three geographical areas (provinces) formed part of the study. Participants were all teachers who fulfil roles as sport coaches at their various schools. Participants were active sport coaches at both primary and secondary schools. An explanatory letter accompanied the questionnaires that were to be completed by respondents, clearly explaining the objective, importance and method of the research. Questionnaires were completed manually by participants.

Participation was strictly voluntary (explained to the headmasters and on the questionnaire itself) and anonymous. A set of questionnaires was left at each participating school and a formal engagement with each headmaster allowed the researcher to explain the research procedure very clearly. Full contact details of the researcher were communicated to the headmaster and the researcher availed himself to come in to the school and explain any unclear aspect of the research to any participant if so required. Questionnaires were left at the school for between two to three weeks, allowing participants sufficient time for completion at a time of their convenience. The researcher took the contact details of a member of the administration staff of each school and agreed a reasonable follow up meeting with that person to collect the questionnaires. After the completed questionnaires had been collected from the schools, the data analysis process began. Schools received a compact, summarised report of the research results presented in written format, for developmental and management purposes. The researcher also expressed his willingness to each headmaster to present the research findings verbally at each school, including practical suggestions. Of the 680 questionnaires distributed amongst the various schools, 364 usable questionnaires were returned (response rate of 53.53%).

Statistical analysis

Statistical analysis of the study was done through the statistical programmes SPSS (SPSS Inc., 2009) as well as Mplus 6.1 (Muthén & Muthén, 2010). Competing measurement models were tested for purposes of factor structure analysis, utilising the Bayesian Information Criterion (BIC) to compare the models. Confirmatory factor analysis was performed with regard to the adapted measuring instruments and their factor structure. Means, skewness and kurtosis of the data were determined through descriptive statistics. By utilising the Cronbach alpha coefficient, reliability of the instruments was determined. Relationships between variables were investigated by using Pearson product moment correlation coefficients. Statistical significance level was set at 95% confidence interval ($p \leq 0.05$). A cut-off point of 0.30 was used to determine practical significance of medium effect, with 0.5 indicating practical significance of large effect (Byrne, 2010).

The model investigation process of the research was done with the Mplus programme to specify continuous latent variables. It is assumed by the popular maximum likelihood (ML) estimator that the observed variables are measured on a continuous scale. The covariance

matrix represents the input type. The latent variables were created by using individual items as indicators; thus item parcelling was not applied (Bandalos & Finney, 2001). The goodness-of-fit of the models was tested by using the traditional χ^2 statistic, comparative fit index (CFI), Tucker–Lewis index (TLI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR).

Little consensus exists on the cut-off values for adequate fit; however, conformist guidelines were followed for this study whereby fit was considered as satisfactory and sufficient if CFI and TLI values were larger than 0.90 (Byrne 2010). A RMSEA value of 0.05 or less designated a good fit, and values between 0.08 and 0.05 represented a moderately good model fit (Browne & Cudeck, 1993). According to Hu and Bentler (1999), the SRMR value should be smaller than 0.05.

RESULTS

Factor structures of the adapted SUDIQ and UWES

The measurement model comprising the latent variables organisational strengths use, organisational deficit improvement, individual strengths use, individual deficit improvement and work engagement, was tested. Individual items were used as indicators. This was done primarily to ensure valid factor structures for the adapted instruments used in the study, namely the SUDIQ and UWES.

Four competing models were tested to gain insight into the factor structures. First, a four-factor structure for the SUDIQ (organisational strengths use, organisational deficit improvement, individual strengths use and individual deficit improvement) and a two-factor structure for engagement (vigour and dedication) were tested. This produced a Bayesian Information Criterion (BIC) value of 40216. Following this, a four-factor structure for the SUDIQ (organisational strengths use, organisational deficit improvement, individual strengths use and individual deficit improvement) and a one-factor structure for engagement were tested. This presented a BIC value of 40210.

Subsequently, a two-factor model for the SUDIQ where the organisational items load on a factor (organisational strengths use and organisational deficit improvement); and the individual items load on a factor (individual strengths use and individual deficit improvement); and a one-factor model for engagement were tested. This model presented a BIC value of 42496.

Lastly, another model was tested where a two-factor structure for the SUDIQ was tested, where all strength-based items load on a factor (organisational strengths use and individual strengths use); and all deficit-based items load on a factor (organisational deficit improvement and individual deficit improvement); together with a one-factor structure for engagement. This model produced a BIC value of 43780.

Based on these results, it can be seen that the lowest BIC value is 40210 (Model 2). Therefore, a four-factor (SUDIQ) and one-factor model (UWES) was established as the best model fit in the study. The goodness-of-fit statistics for this model were $\chi^2 = 2477.02$, $df = 892$, CFI = 0.97, TLI = 0.97 and RMSEA = 0.07. Based on these results, support was found for Hypothesis 1a, but not for Hypothesis 2a.

Positioning of variables in the context of the nomological net

Correlation studies were used to confirm the theoretical positioning of organisational strengths use and organisational deficit improvement as job resources; and individual strengths use and individual deficit improvement as personal resources. This was done to establish both of the postulated job resources and both of the postulated personal resources as such within the framework of the nomological net. Therefore, both in the case of job resources and personal resources, already established theoretical variables had to be incorporated into the study.

In the case of job resources, opportunities for learning and independence at work were included. In the case of personal resources, self-efficacy and self-esteem were included. Statistical detail of the positioning of these variables is described in Table 2 below.

Table 2

Descriptive Statistics and the Correlation Matrix (r) of the Latent Variables

Variable name	<i>M</i>	<i>SD</i>	α	1	2	3	4	5	6	7	8
1. Organisational OSU	4.67	1.01	0.96	-							
2. Organisational ODI	3.69	1.25	0.94	0.53	-						
3. Opportunities to learn	2.19	0.64	0.86	0.47	0.48	-					
4. Independence at work	2.11	0.56	0.90	0.40	0.29	0.60	-				
5. Individual ISU	4.79	0.91	0.93	0.48	0.31	0.43	0.48	-			
6. Individual IDI	4.30	1.07	0.94	0.40	0.46	0.46	0.40	0.71	-		
7. Self-efficacy	4.42	0.64	0.77	0.06	0.03	0.09	0.17	0.30	0.19	-	
8. Self-esteem	4.54	0.58	0.90	0.16	0.05	0.07	0.13	0.30	0.21	0.65	-
9. Work engagement	4.43	1.09	0.94	0.42	0.25	0.46	0.43	0.56	0.51	0.27	0.30

$r \geq 0.30$ is practically significant (medium effect); $r \geq 0.50$ is practically significant (large effect).

As is evident in Table 2, all the scales are reliable (Cronbach alpha ≥ 0.70 , Nunnally & Bernstein, 1994). Support is therefore found for Hypothesis 1b and Hypothesis 2b.

Furthermore, and shown in Table 2, positive relationships were found between all job resources measured in the study, including those of organisational strengths use, organisational deficit improvement, opportunities to learn and independence at work. Correlation between organisational strengths use and opportunities to learn was practically significant with a medium effect. The relationship between organisational strengths use and independence at work was also practically significant with a medium effect. In the case of organisational deficit improvement, it was practically significantly related to opportunities to learn, with a medium effect. There was no practically significant relationship between organisational deficit improvement and independence at work, although the correlation was positive and statistically significant. Therefore, both organisational strengths use and organisational deficit improvement are related to other job resources with the expected strength and significance, supporting Hypothesis 3a.

In the case of personal resources, positive correlations were found between all conceptualised resources. Individual strengths use was positively correlated with self-efficacy and self-esteem, in both cases with practical significance of a medium effect. Individual deficit improvement correlated positively and statistically significantly with both self-efficacy and

self-esteem, but with no practical significance. It therefore seems that especially individual strengths use correlates with personal resources as expected, supporting Hypothesis 3b.

Structural paths between SDBA and work engagement

To test the hypothesised structural model (i.e. the four SUDIQ dimensions predicting work engagement where direct paths were specified between the conceptualised job resources of organisational strengths use, organisational deficit improvement, and work engagement; and also between the conceptualised personal resources of individual strengths use, individual deficit improvement, and work engagement), structural equation modelling was used. This model was a good fit to the data ($\chi^2 = 2477.02$; $df = 892$; $p = 0.00$; CFI = 0.97; TLI = 0.97; RMSEA = 0.07; BIC = 40210). The direct structural paths of the model as well as its estimates and significance are reported in Table 3.

Table 3

Estimates (β) of the Direct Structural Paths in the Standardised Model

Structural path	Estimates (Unstandardised)	S.E (Unstandardised)	Estimates (Standardised)	<i>p</i>
Engagement → Organisational SBA	0.19	0.05	0.20	0.00
Engagement → Organisational DBA	-0.06	0.05	-0.07	0.20
Engagement → Individual SOB	0.44	0.06	0.37	0.00
Engagement → Individual DOB	0.18	0.06	0.21	0.00

* $p \leq 0.05$

As can be seen in Table 3, a positive path was found between organisational strengths use and work engagement ($\beta = 0.20$; $p \leq 0.05$). Organisational strengths use can thus be seen as a significant predictor of work engagement (confirming Hypothesis 4a). However, the relationship between organisational deficit improvement and work engagement was not proven significant ($\beta = -0.07$; $p > 0.05$), therefore organisational deficit improvement cannot be seen as a significant predictor of work engagement (not confirming Hypothesis 4b). A significant and positive path was found between individual strengths use and work engagement ($\beta = 0.37$; $p < 0.05$), thereby confirming Hypothesis 5a. This also applied to the relationship between individual deficit improvement and work engagement ($\beta = 0.21$; $p < 0.05$), rendering individual deficit improvement a predictor of work engagement and thus confirming Hypothesis 5b. Based on these results, all variables were significant predictors of

engagement, except organisational deficit improvement. Individual strengths use was the strongest predictor of work engagement. Figure 2 provides a graphic presentation of the structural paths of the discussed latent variables.

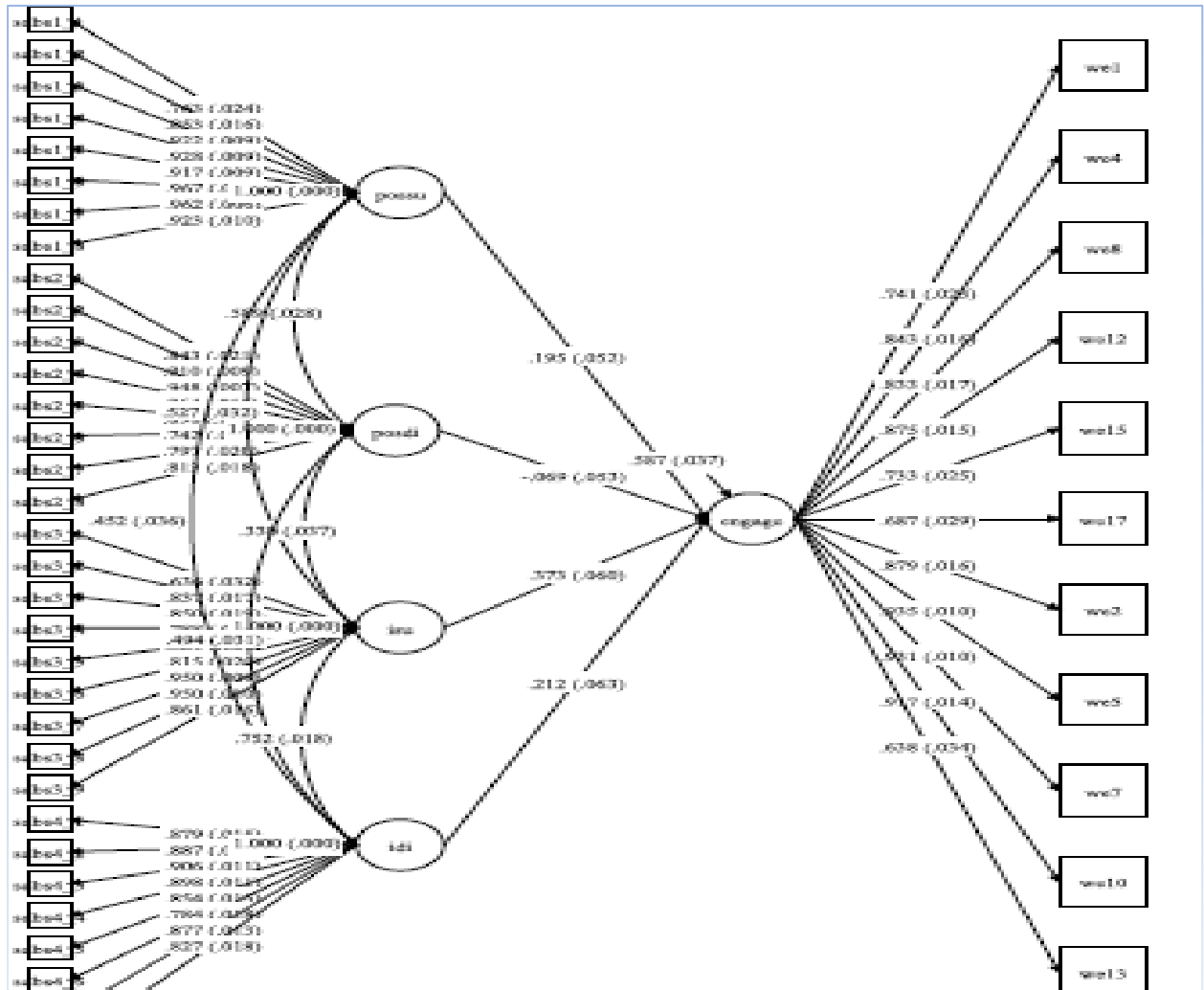


Figure 2. Structural paths between organisational strengths use, organisational deficit improvement, individual strengths use, individual deficit improvement and work engagement

DISCUSSION

The objectives of this study were to test the structural models of adapted versions of both the Strengths Use and Deficit Improvement Questionnaire (SUDIQ) and the Utrecht Work Engagement Scale (UWES); to relate organisational strengths use and organisational deficit improvement to job resources, and individual strengths use and individual deficit

improvement to personal resources; and to prove structural paths between organisational strengths use/organisational deficit improvement, as well as between individual strengths use and individual deficit improvement; and work engagement.

The predicted factor structure included a four-factor structure for the SUDIQ and a two-factor structure for the UWES. Adapted versions of these instruments were utilised to ensure practical relevance for specific use in the sport coaching environment. It was therefore important to gain insight into the factorial models of both these measures while ensuring their scientific integrity was maintained through validity and reliability tests. It was also important to establish the position of organisational strengths use and organisational deficit improvement in its relation to established job resources; and individual strengths use and individual deficit improvement in relation to established personal resources. This was done to establish the position of these resources in the nomological net. In the case of job resources, opportunities for learning and independence at work were investigated as part of this study. Self-efficacy and self-esteem were the personal resources compared to individual strengths use and individual deficit improvement. Finally, direct structural paths were investigated between the strength- and deficit-based approach, on organisational and individual level; and work engagement. Positive correlations were predicted, based on findings in literature and proven conceptual frameworks, such as the JD-R model, the happy-productive worker thesis and the broaden-and-build theory.

The first objective of the study was proving that the SUDIQ would hold a four-factor structure, as reported by Els et al. (in process). This includes organisational strengths use, organisational deficit improvement, individual strengths use and individual deficit improvement. Competing measurement models were utilised to explore this. The hypothesised four-factor structure and competing two-factor structure were tested where the differentiation was made between organisational and individual factors; as well as a two-factor model where differentiation occurred between strengths use items and deficit improvement items. The proposed four-factor structure proved to have the best model fit.

The second part of the study's first objective was to prove an adapted version of the SUDIQ would be reliable for use in a sport coaching environment. In this study, the Cronbach alpha values for organisational strengths use were determined as 0.96; for organisational deficit improvement at 0.94; for individual strengths use at 0.93; and for individual deficit improvement at 0.94. Effectively all four factors of the adapted SUDIQ were thus proven to

be reliable and could be used scientifically in a sport coaching environment. This supported the work done by Els et al. (in process) that found the following Cronbach alpha values: organisational strengths use ($\alpha = 0.96$); organisational deficit improvement DBA ($\alpha = 0.93$); individual strengths use ($\alpha = 0.94$); and individual deficit improvement ($\alpha = 0.94$).

The next objective of the study was to prove an adapted UWES would have a two-factor structure. The factor “absorption” of the traditional three-factor model of the UWES was discarded during this study. Various sources of literature have described absorption as a less acute factor in the concept of work engagement (Schaufeli & Bakker, 2001). This is because various studies have proven absorption to be a consequence, or result, of work engagement, rather than a direct factor that makes up its composition (Montgomery et al., 2003). Literature is currently favouring the two-factor conceptualisation of work engagement (Schaufeli & Bakker, 2001) and subsequently this research proposed a two-factor structure as well. Through competing measurement models a two-factor model and one-factor model for work engagement were assessed. Ultimately, the one-factor model proved the best fit with sufficient BIC, RMSEA, CFI and TLI values. This is consistent with a large sample study led by Sonnentag (2003) that determined a one-factor structure for work engagement. Storm and Rothmann (2003) have also found goodness-of-fit for a one-factor structure for work engagement in a South African sample.

Following the establishment of a one-factor structure for work engagement, it was also important to prove sufficient levels of reliability for the adapted UWES utilised for purposes of this study. In the context of this study, the Cronbach alpha coefficient was 0.94; well above the cut-off point proposed by Nunnally and Bernstein (1994) of 0.70. Numerous studies have proven reliability of the UWES. Cronbach alpha coefficients have varied between 0.78 and 0.89 across an extended number of samples (Schaufeli et al., 2002). In the South African context, reliabilities have also been proven (e.g. Mostert & Rathbone, 2001). Through this, it was thus established that the confirmed one-factor structure of the adapted UWES was reliable and could be used effectively in a sport coaching environment.

A further goal of the study was to prove relations between organisational strengths use, organisational deficit improvement and other job resources as found in literature. It was argued that both organisational strengths use and organisational deficit improvement can be postulated as job resources as these constructs allow for the attainment of organisational

goals (Bakker & Demerouti, 2007). It abridges job demands and facilitates an organisational climate that is conducive for the realisation of organisational goals (Xanthopoulou et al., 2009). For comparative purposes, the established job resources of opportunities for learning and independence at work were utilised in this study. Moderate and positive correlations were found between all job resources measured in the study, containing those of organisational strengths use, organisational deficit improvement, opportunities for learning and independence at work. It can therefore still be argued that both organisational strengths use and organisational deficit improvement are job resources, ensuring another objective of the study was met.

Following the confirmation of organisational strengths use and organisational deficit improvement as job resources, it was postulated that individual strengths use and individual deficit improvement will be related to personal resources. For purposes of comparison, self-efficacy and self-esteem were included in this study. Personal resources are individual capitals (Hobfoll, 1989) that assist people in dealing with challenges and stressors, bolstering their capacity to reach personal and work-related goals (Van den Heuvel et al., 2010). It assists people in translating the job resources at their disposal into favourable outcomes (Hobfoll, 2002). In the study moderate and positive correlations were found between individual strengths use with self-efficacy and self-esteem. A positive correlation was found between individual deficit improvement and self-efficacy, as well as between individual deficit improvement and self-esteem. However, neither of these correlations were practically significant. Thus, this study holds that individual strengths use could be regarded as a personal resource, however, it cannot be emphatically proven that individual deficit improvement is a personal resource in relation to the nomological net of other personal resources.

Following the conceptualisation of both the job resources and personal resources, structural paths between organisational strengths use and work engagement had to be established. The prediction was also that structural paths will exist between organisational deficit improvement and work engagement. A positive path was found between organisational strengths use and work engagement with estimate values at sufficient levels. It can therefore be stated that organisational strengths use will be a predictor of work engagement. This supports the theory of Linley and Harrington (2006) who found a direct correlation between

organisational strengths use and work engagement. Cameron et al. (2011) have also proven a relationship between organisational strengths use and positive work-related outcomes. No structural paths between organisational deficit improvement and work engagement could be proven. In the context of this study, organisational deficit improvement was thus not a predictor of work engagement. The objective of confirming structural paths between both organisational strengths use and work engagement, as well as between organisational deficit improvement and work engagement was thus only partially met.

The next objective of the study was to prove that a structural path exists between individual strengths use and work engagement. Direct structural paths were proven between individual strengths use and work engagement. This supports the work of Govindji and Linley (2007) who found that the capacity to utilise one's strengths is favourable when emerging oneself in the task at hand and achieving personal goals. The following postulation of this study held that individual deficit improvement will be a predictor of work engagement. The structural path was proven between these two constructs. From the context of the study it also emerged that individual strengths use is the strongest predictor of work engagement. Thus, an individual who has the capacity to use his/her strengths will be highly likely to experience high levels of work engagement.

In conclusion, the sport- and sport coaching fraternity is in critical need of empirical and substantiated scientific work (Levermore & Beacom, 2009). This study addressed that need by providing two adapted measures for specific use in the sport- and sport coaching environment. Firstly, the SUDIQ was adapted for purposes of use in this sector. Through competing measurement models, a four-factor structure model was found for the scale, comprising of organisational strengths use, organisational deficit improvement, individual strengths use and individual deficit improvement. All four these dimensions were found reliable. This ensures the adapted SUDIQ can be used effectively in a sport environment in future, for example where governing organisations want to self assess their level of strength use and deficit improvement as an effective way to develop coaches; or to understand the capacity of these coaches to develop themselves by building out their personal strengths and improving on their areas of deficit. An adapted version of the UWES was also provided and can be used with scientific integrity in the context of sport coaching in future. In the context of the study, a one-factor structure for work engagement was established. A very high level of reliability was found for the adapted measure, rendering it a useful tool that can be used for

scientific study in the sport sector. Organisational strengths use and organisational deficit improvement were related to job resources; and individual strengths use and individual deficit improvement to personal resources. Finally, three of the four dimensions (all except organisational deficit improvement) were significantly and positively related to engagement

Implications for management

Traditionally, organisations focused their energies towards rectifying the deficits and flaws of employees. Buckingham and Clifton (2001) communicated that organisations have spent a great deal of effort towards identifying these areas of insufficiency and putting interventions in place to improve these areas. This approach has long been the driving force in the training and development departments of organisations that seek to rectify the areas of deficiency in their enterprises as a means of achieving their organisational objectives (Clifton & Harter, 2003).

This approach, known as the deficit-based approach (DBA), has been very useful in organisational development for a long time. However, a modern perspective requires more from organisations. For totalised and optimum development of the individual to occur, a more balanced approach should be followed where both the areas of deficit and strength of employees are accentuated and expanded (Linley et al., 2006; Wood et al., 2011). Emphasising the potential and virtues of people enables the achievement of positive outcomes, such as profitability and increased productivity (Cameron et al., 2011). Recognising these areas of strengths is known as the strength-based approach (SBA) and has the potential to generate a number of favourable outcomes. This premise is held by Luthans and Youssef (2007), who have found a balanced strength- and deficit-based approach (SDBA) as a non-negotiable inclination of the organisation that wants to remain competitive and relevant in a very competitive modern context.

This research has proven the critical importance for management to focus particularly on the accentuation of strengths as a manner of achieving key organisational objectives. A very strong relationship was found between organisational strengths use and work engagement in the sample contained in this study. Organisational strengths use is thus a key predictor of work engagement and can therefore be utilised fruitfully in an organisational context to

facilitate an environment conducive to the attainment of organisational goals. This supports the research of Linley and Harrington (2006) who found a direct correlation between organisational strengths use and work engagement. Drawing this to the study and focusing particularly on the context of sport- and sport coaching, it can thus be deduced that the management of schools should place a greater emphasis on the development of sport coaches' strengths, and provide opportunities for such coaches to enhance self-awareness in order to be able to capitalise on their own strengths. Coupling this with the capacity development of coaches to individually improve on their deficits and areas of insufficiency will ensure that favourable work-related outcomes can be met, such as work engagement, the outcome studied in this research. The study provides clear value for following this balanced approach as a means of engaging these coaches in their work roles and creating opportunity for enhanced performance.

Implications for the individual

Within the context of this study, individual strengths use and individual deficit improvement were postulated as personal resources. Personal resources are individual human capitals that assist people to negotiate their challenges and stressors more effectively and enable them to achieve personal and work-related goals (Van den Heuvel et al., 2010).

The study proved significant relationships between personal resources, individual strengths use and individual deficit improvement; and work engagement. Therefore, it can be postulated that the capacity to use strengths and improve deficits is a crucial personal skill for individuals and should therefore be developed as a manner of facilitating optimal human functioning. It was also proved that individual strengths use is the strongest predictor of work engagement of all the variables introduced in the study. Therefore, if an individual has the inherent capacity to utilise his/her strengths, he/she will be able to more effectively negotiate job resources and achieve desirable outcomes. This is in line with the work of Van den Heuvel et al. (2010) who stated that personal resources will positively assist the individual in his/her pursuit of goals. A compelling argument is thus made for empowering individuals to develop both their strengths and areas of deficit as a means of ensuring personal objectives are reached.

Limitations of the study and recommendations for future research

A possible limitation of the study was its cross-sectional design. This ensured a perspective of measurement at a specific time, but did not allow for a longitudinal view of the variables. Considering that the research tests new models, a longitudinal study in the future may be beneficial.

A further relevant limitation was the biographical dynamics of the sample. A major challenge was shifting the mind-set of the participants so that they complete the research questionnaire in the capacity of their role as sport coaches, and not in the mind-set of teachers, which is their primary occupation. Various measures were introduced to ensure participants responded from the perspective of their experiences as sport coaches, such as specifying this on the questionnaire and clearly explaining this to the headmasters and participating teachers before the study commenced. By using teachers for purposes of the study, a large sample could be obtained which was beneficial to the statistical analysis process. In South African schools, the predominant number of teachers also coach sport, which made the decision to engage them as participants a logical one. However, a recommendation for future research can be to engage professional sport coaches whose sole occupation is coaching, to assess the hypotheses. This will also prevent disparity that was present in this study (in this same sample, both coaches who informally coach athletes at age group level in schools and national competition level coaches were included).

Homogeneity of the sample was another limitation. From a racial perspective, white respondents by far formed the majority of the participants. In South Africa, where true diversity exists, this sample could be described as non-representative of the true population. Value can be gained from a more racially diverse sample group in future studies.

Self-report questionnaires that were used in this study is also a potential stumbling block in research, as it can cause common method variance and may be an altered version of the true perception of participants. However, there are limited means available to counteract this problem (Salkind, 2009). It can be suggested, however, that less-biased measures are used in future research efforts.

Possible meditation models could be tested in the future where personal resources of strengths use and deficit improvement can mediate between organisational strengths use/deficit development and other outcomes such as engagement. It was initially also proposed in this study that the personal resources of individual strengths use and individual deficit improvement will mediate the effect of the job resources, organisational strengths use and organisational deficit improvement, on work engagement. This is consistent with the work of Van den Heuvel et al. (2010), who found that personal resources consist of properties that can translate available job resources into favourable work-related outcomes. This is because personal resources are inherent capitals that assist human beings in fostering greater levels of subjective well-being (Peterson & Seligman, 2004), making them more adapt to manage and gain most from their available job resources; thus making attainment of goals more likely. To establish the individual strengths use and individual deficit improvement as mediators in the context of the study, structure equation modelling was used to investigate the change in structural paths between organisational strengths use, organisational deficit improvement and work engagement. However, the output rendered a ‘matrix is not positive definite’ message, indicating that the model did not fit the data. No clear mediating properties could therefore be established for the personal resources in this study. However, considering the changeable nature of the variables and the fact that these variables will prove to be dynamic over time, it can reasonably be expected that future studies may reveal individual strengths use and individual deficit improvement as mediators between organisational strengths use, organisational deficit improvement and work engagement.

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CHAPTER 3

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

The conclusions drawn and described in this chapter arise from the general and specific objectives of this study.

The limitations of the study in question will be placed in perspective, followed by recommendations for future research.

3.1 CONCLUSIONS

The general objective of this study was to conceptualise a strength-based approach, deficit-based approach and work engagement in literature; to determine whether the adapted versions of the SUDIQ and UWES are valid and reliable for use in a sport coaching environment; to determine whether organisational strengths use and organisational deficit improvement can be postulated as job resources; and individual strengths use and individual deficit improvement as personal resources, in theoretical relation to established job/personal resources within the nomological net; to test a structural model where organisational strengths use, organisational deficit improvement, individual strengths use, and individual deficit improvement predict work engagement in a sample of sport coaches; and to make recommendation for future research and practice.

Firstly, an attempt was made to conceptualise a balanced strength- and deficit-based approach (SDBA), job resources, personal resources and work engagement through established literature. Extending on the traditional organisational inclination of accentuating the areas of deficit and flaw of employees (Clifton & Harter, 2003), the SDBA follows a more balanced method by redressing areas of insufficiency with the emphasis on the potential, virtues and strengths of employees (Linley, Joseph, Harrington, & Wood, 2006; Seligman & Csikszentmihalyi, 2000; Wood, Linley, Maltby, Kashdan, & Hurling, 2011). This is important to ensure totalised development of the individual and optimal human functioning (Govindji & Linley, 2007). Luthans and Youssef (2007) described a strength- and deficit-based approach as a non-negotiable pre-requisite for remaining competitive and relevant in a

competitive global context. This is due to the positive outcomes related to both strength and deficit approaches. Linley and Harrington (2006) emphasised that it will not be possible for organisations to move towards a more favourable position and achieve their goals without being realistic about their shortcomings and addressing these areas. On the other hand, Bouskila-Yam and Kluger (2011) found a direct correlation between strength-based approaches, job performance and organisational motivation, and Cameron, Mora, Leutscher, and Calarco (2011) found the strength-based approach to lead to such outcomes as productivity and profits for organisations.

The strength- and deficit-based approach has emerged from the Positive Psychology that postulates it is not enough to redress only flaws and weak points, but it is important to also accentuate human potential and people strengths (Seligman, 2002; Seligman & Csikszentmihalyi, 2000). The positive outcomes associated with the approach have their theoretical origin in the work of the happy-productive worker thesis, that states positive development practices harness positive affect (such as happiness), which in turn stimulates high levels of performance through a series of heightened mechanisms of motivation (Cropanzano & Wright, 2001). It is also supported by the broaden-and-build theory of Frederickson (2002), who states that these heightened mechanisms innately lay the platform for further positive experiences in a sequential state. Govindji and Linley (2007) found that organisations that highlight and develop the strengths of their employees allow for these individuals to expand their outlook, be more happy and, finally, more engaged in their work. This should be complemented by the improvement of the individual's area of deficit, in order to create true holistic well-being and development (Kaiser & White, 2009).

Having understood the importance and value of following the balanced strength- and deficit-based approach, this study was to investigate the factor-structure and reliability of a measure that assesses the extent of strengths use and deficit improvement, both from an organisational and individual perspective. The SUDIQ proved of highest value in this pursuit as it aims to understand the extent to which organisations utilise the strengths and improve the deficits of their employees; whilst also tapping into the capacity of individuals to use their own strengths and improve areas of deficit (Els, Mostert, Van Woerkom, Rothmann, & Bakker, in process). The SUDIQ comprises four factors, namely organisational strengths use, organisational deficit improvement, individual strengths use and individual deficit improvement.

To ensure this measure was usable and practical in a sport- and sport coaching sector, it was adapted for this particular study. This addresses a critical need for extended empirical work in the sporting sector (Levermore & Beacom, 2009). Competing measurement models were used to assess the factor structure of the adapted measure, as per the work of Els et al. (in process). A four-factor structure was confirmed, comprising organisational strengths use, organisational deficit improvement, individual strengths use and individual deficit improvement. This proved Hypothesis 1a of the study. Through Cronbach alpha coefficients sufficient reliability was displayed for all four these factors. Through this, Hypothesis 1b was proven.

Following the need for empirical work in the sporting sector, this study provided an adapted version of the Utrecht Work Engagement Scale (UWES) as a means to measure the levels of work engagement amongst participants. Work engagement is defined as a “positive, fulfilling, work-related state of mind, characterized by vigour, dedication, and absorption” (Schaufeli & Bakker, 2004, p. 295). However, various studies have proved absorption to be a less critical factor to the conceptual framework of work engagement (Schaufeli & Bakker, 2001) and subsequently it was also discarded for purposes of this study. It has been proven that absorption is rather a consequence, or result of engagement (Montgomery, Peeters, Schaufeli, & Den Ouden, 2003). Vigour as a factor is revealed in displays of on-going positive affect for elements and dimensions in one’s work context; being observable in cognitive vivacity, physical power and emotional force (Schaufeli & Bakker, 2004). Dedication is displayed through inspiration and pride for one’s job (Schaufeli, Salanova, González-Romá, & Bakker, 2002).

By incorporating vigour and dedication into this study, the UWES was adopted to be specific for use in the sport coaching environment. As was the case with the SUDIQ, competing measurement models were once again utilised to gain insight into the factor structure of the adapted UWES. A two-factor and one-factor structure was tested. It was predicted that work engagement will hold a two-factor structure in this research, as proven in various recent studies (Demerouti, Mostert, & Bakker, 2010; Mostert, Cronje, & Pienaar, 2006). However, the one-factor model displayed the best model fit through BIC, CFI, TLI and RMSEA values. This supported research already done by Sonnentag (2003) and Storm and Rothmann (2003) who established one-factor models for work engagement in large sample studies. Therefore, because the two-factor structure for work engagement could not be proven, Hypothesis 2a

was not confirmed. Through the Cronbach alpha coefficients, a high level of reliability was confirmed for the adapted measure ($\alpha = 0.94$), thereby confirming Hypothesis 2b.

The following objective of the study was relating the organisational strengths use and organisational deficit improvement to job resources; and individual strengths use and individual deficit improvement to personal resources, to find theoretical relation and to confirm that these constructs can indeed be classified as job resources and personal resources, as part of reference to the nomological net. Job resources include those work-related resources that enable the accomplishment of organisational outcomes and goals (Bakker & Demerouti, 2007). It can be visible in various dimensions, such as physical, social, or organisational (Bakker & Demerouti, 2008; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009).

Considering the JD-R model, job resources constitute those capitals that kindle progress towards reaching workplace goals, condense job demands and harness advancement and growth across various individual and organisational levels (Xanthopoulou et al., 2009). The research proved a correlation between the organisational strengths use, organisational deficit improvement and other job resources, including opportunities for learning as well as independence at work. Both opportunities for learning and independence at work have been proven as job resources in previous studies and literature. A positive, practically significant correlation was found between organisational strengths use and opportunities for learning; organisational strengths use and independence at work; and organisational deficit improvement and opportunities to learn. The correlation between organisational deficit improvement and independence at work was also positive, but marginally missed the cut-off point for it to be practically significant. However, the research still proved that organisational strengths use and organisational deficit improvement are moderately related to job resources, thereby confirming Hypothesis 3a of the study.

Individual strengths use and individual deficit improvement were studied in relation to other personal resources. Personal resources have been described as “aspects of the self that are generally linked to resiliency” (Hobfoll, Johnson, Ennis, & Jackson, 2003, p. 632). The reference to “personal” implies that personal resources are subjective and central to the individual (Hobfoll, 1989). The individual implication considered, personal resources are, however, still proposed in relation to a specific domain in the case of the study to the working

environment (Van den Heuvel, Demerouti, Schaufeli, & Bakker, 2010). Personal resources can be described as those aspects that assist individuals in dealing with challenges within their particular working environment (Pearlin & Schooler, 1978). It is a valuable tool for dealing with adversity and enables the individual to attain goals (Van den Heuvel et al., 2010). This study investigated the proposed personal resources of individual strengths use and individual deficit improvement in relation to already established resources, namely self-efficacy and self-esteem. Positive correlations were found between all the variables, with practically significant correlation between individual strengths use and self-efficacy, as well as between individual strengths use and self-esteem. Although the correlation between individual deficit improvement and both self-efficacy and self-esteem was positive, this correlation was not found to be practically insignificant with either self-efficacy or self-esteem. On a practical level, it could therefore be postulated that individual strengths use is related to self-esteem and self-efficacy. Thus, Hypothesis 3b of the study was only partially true.

Hypothesis 4a of the study proposed direct structural paths between organisational strengths use and work engagement. Sufficient estimate values were found and the correlation was positive and practically significant. It was thus deduced that organisational strengths use can predict work engagement, proving Hypothesis 4a to be true. Linley and Harrington (2006) confirmed a direct relationship between organisational strengths use and work engagement in organisations that use this approach in the development of their people. Organisations that follow a strength-based approach create a climate where employees dedicate their full effort and capacity towards their work duty (Demerouti & Bakker, 2011).

Following this, the relationship between organisational deficit improvement and work engagement was investigated. Although there was a positive correlation, no practically significant direct structural paths could be proven between these variables, implying that in the context of this study, organisational deficit improvement cannot predict work engagement. Hypothesis 4b was thus not proven.

Hypothesis 5a predicted direct structural paths between individual strengths use and work engagement. The study revealed a positive correlation that was practically significant. Individual strengths use is thus a predictor of work engagement (Hypothesis 5a). Furthermore, individual strengths use was also found to be the strongest predictor of work

engagement in the study. Direct structural paths that were practically significant were also found between individual deficit improvement and work engagement, rendering individual deficit improvement a predictor of work engagement, proving Hypothesis 5b. Thus, both personal resources of individual strengths use and individual deficit improvement were established as predictors of work engagement. This is in line with a previous study by Demerouti and Bakker (2011) which found a direct correlation between personal resources and work engagement. This can be viewed in the light of the properties that constitute personal resources, enabling people to be in a better position to achieve their goals (Xanthopoulou et al., 2009).

3.2 LIMITATIONS OF THE RESEARCH

The study produced valuable new insights that can be applied fruitfully in future research. However, some limitations were observed.

The first limitation of this study was its design, being cross-sectional. This allowed for a measurement at a particular moment in time, but did not provide for a longitudinal perspective that could assess an objective view of possible changes and dynamics in the variables over time. According to Salkind (2009), a cross-sectional design does not allow for individual continuity and assessment of the changing impact of the variables on the participants over time. Considering that the research tested fairly new models, a longitudinal study would prove very valuable. Instead, relationships between variables were only established for a particular point in time, and not confirmed.

Biographical dynamics present another limitation in the context of the study. All participants' first and most important profession was that of teaching. Although they all act as sport coaches as well in the context of their role as educators, it could be argued that it would be difficult for them to respond consistently throughout the questionnaire, from the perspective as sport coaches only. However, various measures were introduced to ensure participants answered from the perspective of their involvement as sport coaches, such as specifying this on the questionnaire and clearly explaining this to the headmasters and participating teachers as part of the educational process of the study. The rationale for using teachers was to enlarge the sample size as a means of enabling greater statistical analysis. From this perspective,

there was value in engaging a sample of teachers. In the South African context, the predominant number of teachers also fulfil roles as sport coaches. A better representation of sport coaches would have been gained through utilising full time, professional coaches whose sole occupation is that of coaching sport. This will also prevent discrepancy that was present in this study (in this same sample, both coaches who informally coach athletes at age group level in schools and national competition level coaches were included).

Homogeneity of the sample was an additional limitation. The majority of respondents were from the white racial group, which is not truly representative of the South African population. The country is truly diverse in its biographical compilation of race. A more racially representative sample of respondents would have proven valuable from the perspective of a South African context.

Through utilising self-report questionnaires in the study, potential for common method variance could have occurred. This presents the possibility of an altered version emerging of the true perception of participants. Limited means are however available to counteract this problem. It can be suggested that less-biased measures are used in future research efforts.

3.3 RECOMMENDATIONS

Despite the limitations alluded to, this study still holds valuable insights that can be used practically and in further research.

3.3.1 Recommendations for the organisations

The main objectives of this study were to conceptualise a strength-based approach, deficit-based approach and work engagement in literature; to determine whether the adapted versions of the SUDIQ and UWES are valid and reliable for use in a sport coaching environment; to determine whether organisational strengths use and organisational deficit improvement can be postulated as job resources; and individual strengths use and individual deficit improvement as personal resources, in theoretical relation to established job/personal resources within the nomological net; to test a structural model where organisational strengths use, organisational deficit improvement, individual strengths use, and individual

deficit improvement predict work engagement in a sample of sport coaches; and to make recommendation for future research and practice.

Various studies have proven the important priority organisations must place on providing employees with sufficient resources to execute their work tasks more efficiently and to attain favourable work-related and personal outcomes (Bakker & Demerouti, 2007; Schaufeli & Bakker, 2004). Through this, optimum development can be achieved and the well-being of the employee and attainment of work-related goals will evidently flow from this. In this study, organisational strengths use and organisational deficit improvement were related to job resources, and individual strengths use was related to personal resources.

Following the confirmatory work of this research, organisations are urged to follow a balanced strength- and deficit-based approach, where the improvement of deficits is placed alongside the accentuation, use and development of strengths. In fact, following this research, it can be stressed that the emphasis on strengths use must be the first and most important priority of organisations when developing their people. This recommendation is made after it had been established that, in the context of this study, the capacity for individual strengths use was the strongest predictor of work engagement. Thus, organisations must structure their training and development intervention around mechanisms to improve the capacity of employees and to build on their strengths. This must be complemented with interventions that empower individuals to work, individually, on their areas of deficit; and organisational interventions to build on employee strengths. This study revealed that organisational deficit improvement was actually not a significant predictor of work engagement. It is not recommended that organisations discard their interventions to rectify employee deficit, but it is strongly recommended that the traditional approach of only focusing on employee weaknesses is replaced by a balanced approach where strengths use is the primary priority.

This has significant practical implications for the sport coaching profession; one that has associated with it intense demands, stresses and pressure (Olusuga, Maynard, Hays, & Butt, 2012). By assisting individual sport coaches to become more adept in using their own strengths and developing their deficits; whilst also providing interventions to develop the strengths of coaches, schools, sport governing bodies and -associations, will foster greater levels of work engagement and enable coaches to achieve their goals. This is critically important, as the role of a sport coach can be complex and can ask an individual to be able to

occupy a multitude of different persona, making it quite a demanding profession (Lyle, 2002). This study provided adapted measures of both the SUDIQ and UWES, reliable and valid for use in the sporting sector. It is strongly recommended that organisations make use of these measures for empirical work in structuring their interventions, as empirical work in the sporting industry is much needed (Levermore & Beacom, 2009). This is particularly true in South Africa, where sport plays a major social and communal role in bringing people from diverse backgrounds together (Keim, 2003; Swart, Bob, Knot, & Salie, 2011).

3.3.2 Recommendations for future research

It can be recommended that future studies in this research area follow a longitudinal design. This will allow for a more accurate representation of the dynamics of the constructs over a period of time, as opposed to a single exploration during an isolated period in time (Salkind, 2009). This will also allow for the relationships between variables in the study to be confirmed, which will be very valuable as this represents new theories in the field that must be established with high levels of scientific integrity. A longitudinal design will provide greater understanding of the balanced strength- and deficit-based approach, and will provide a greater perspective on the relationship between this approach and work engagement over an extended period. It will also act confirmatory to the classification of organisational strengths use and organisational deficit improvement as job resources; and individual strengths use and individual deficit improvement as personal resources. A longitudinal design will also confirm or reject the theoretical premise of this research that holds all the strengths use and deficit improvement variables to be psychological capitals, i.e. dynamic variables that can change over time.

Further research on the reliability and validity of the adapted measures will prove very valuable. The sample used for this study represented a broad range of demographics pertaining to level of education, sporting codes coached, age and level of education, but was homogenous pertaining to race and language. This can have implications in the South African context, where great levels of diversity exist pertaining to these factors. It will also substantiate the factor structures for both the SUDIQ and UWES that were established in this study.

The possible role of both the conceptualised personal resources of individual strengths use and individual deficit improvement as mediators between job resources and work engagement is a critical priority for future research. It could not be proven conclusively in this study that these personal resources do in fact act as mediators, which is in contrast to what has been observed by Van den Heuvel et al. (2010), who have described that personal resources will strengthen the paths between job resources and positive work-related outcomes. Further studies may prove that individual strengths use and individual deficit improvement do in fact comprise mediating properties.

It is recommended that future studies focus exclusively on full time, professional sport coaches, as opposed to teachers who secondarily fulfil roles as sport coaches in the context of their profession. This will of course decrease the sample size and number of respondents, as there are a very limited number of individuals who coach sport professionally and full time, but will provide a more accurate representation of the research findings in the focused sporting industry.

Possible mediation models could be tested in future where personal resources of strengths use and deficit improvement can mediate between organisational strengths use/deficit development and other outcomes such as engagement. It was initially also proposed in this study that the personal resources of individual strengths use and individual deficit improvement will mediate the effect of the job resources of organisational strengths use and organisational deficit improvement on work engagement. This is consistent with the work of Van den Heuvel et al. (2010), who found that personal resources consist of properties that can translate available job resources into favourable work-related outcomes. This is because personal resources are inherent capitals that assist human beings in fostering greater levels of subjective well-being (Peterson & Seligman, 2004), making them more adapt to manage and gain the most from their available job resources, and making attainment of goals more likely. To establish the individual strengths use and individual deficit improvement as mediators in the context of the study, structure equation modelling was used to investigate the change in structural paths between organisational strengths use, organisational deficit improvement and work engagement. However, the output rendered a 'matrix is not positive definite' message, indicating that the model did not fit the data. No clear mediating properties could therefore be established for the personal resources in this study. However, considering the changeable nature of the variables and the fact that these variables will prove to be dynamic over time, it

can reasonably be expected that future studies may reveal individual strengths use and individual deficit improvement as mediators between organisational strengths use, organisational deficit improvement and work engagement.

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