

Perceived organisational support for strengths use: The factorial validity and reliability of a new scale in the banking industry

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Dates:

Received: 08 May 2012

Accepted: 20 Mar. 2013

Published: 22 May 2013

How to cite this article:

Keenan, E.M., & Mostert, K. (2013). Perceived organisational support for strengths use: The factorial validity and reliability of a new scale in the banking industry. *SA Journal of Industrial Psychology/SA Tydskrif vir Bedryfsielkunde*, 39(1), Art. #1052, 12 pages. <http://dx.doi.org/10.4102/sajip.v39i1.1052>

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Orientation: The perceived organisational support for strength use (POSSU) scale determines the extent to which employees perceive that their organisations support them to use their strengths in the workplace.

Research purpose: The purpose was to determine the validity and reliability of the new POSSU scale.

Motivation for the study: There are instruments and studies that aim to identify and describe individual strengths. However, no instruments measure whether employees perceive that their organisations use their strengths in the *workplace*.

Research design, approach and method: The authors used a cross-sectional field survey approach and an availability sample of employees ($N = 165$) who worked in the banking sector. They used exploratory factor analysis to test the factorial validity and to establish whether POSSU is an independent job resource. They performed regression analyses to examine whether POSSU is a significant predictor of outcomes.

Main findings: The findings indicated a clear one-factor model with strong item loadings ($\alpha = .97$). When the authors included other resources, they identified a five-factor model, where all the items loaded onto the supposed factors. POSSU was a significant predictor of burnout and engagement after controlling for job resources and a deficiency-based approach.

Practical/managerial implications: A valid and reliable POSSU scale could lead to increased awareness about the use of employees' strengths in organisations and help to determine their influence and value.

Contribution/value-add: This study contributes to the limited research available in South Africa on the measurement of whether employees perceive that their organisations use their (the employees') strengths.

Introduction

Background to the study

Using the postulation that the potential for performance improvement lies in identifying the weaknesses of people, most organisations follow an approach that focuses on their employees' deficiencies (Buckingham & Clifton, 2001; Stienstra, 2010). Training, coaching and other means then improve the weaknesses (Clifton & Harter, 2003). Leadership development efforts that companies used in the past tended to be conservative and concentrated on correcting weaknesses and, at best, achieving only minimal improvements without providing a strategy for making good leaders great (Trinka, 2004). When *weaknesses* are the focus of employees' development plans, the aim is to identify and rectify employees' limitations (Bouskila-Yam & Kluger, 2011; Clifton & Harter, 2003; Harris & Thoresen, 2006).

All organisations must identify weaknesses. Identifying weaknesses is associated with reducing unrealistic expectations, dealing with, and realising the reality of, situations and allowing others to contribute to them (Linley, Govindji & West, 2007). However, it also links to negativity, including the likelihood of draining the energy levels of employees and leading to negative feelings like frustration and anxiety (Page & Vella-Broderick, 2008). Furthermore, focusing only on weaknesses might prevent employees from contributing, hinder their performance and their sense of well-being (Roberts, Spreitzer, Dutton, Quinn, Heaphy & Barker, 2005). Studies that support this approach show only minimal improvement in employee behaviour and provide little, if any, evidence that it promotes excellence (Trinka, 2004).

With the emergence of the positive psychology paradigm, organisational psychologists have realised that organisations need to manage weaknesses and that the focus should move towards improving employee strengths and talents. Therefore, the aim is to reach optimal functioning, not by improving weaknesses but by building strengths (Roberts *et al.*, 2005). They see focusing on strengths as a positive technique, which aims to improve individual and organisational productivity by emphasising the identification, development, use and appreciation of employee strengths (Stienstra, 2010).

It is clear that focusing on strengths benefits the employees and their organisations (Harter, Schmidt & Hayes, 2002; Elston & Boniwell, 2011). Benefits for the employees include the experience of positive emotions (Govindji & Linley, 2007), an increased sense of authenticity and enthusiasm for taking action (Elston & Boniwell, 2011). It also relates to increased well-being (Proctor, Maltby & Linley, 2010; Seligman, Steen, Park & Peterson, 2005). Employees who capitalise on their strengths are more engaged in the work setting (Harter *et al.*, 2002), show increased rates of development (Minhas, 2010) and ultimately produce better work (Smedley, 2007; Stefanyshyn, 2007). The focus on strengths also links to increases in employee engagement, which has strong links with business outcomes like profitability, turnover, safety and customer satisfaction (Harter *et al.*, 2002). Clifton and Harter (2003) conducted a meta-analytical study on the results of 65 firms that used employee engagement interventions. Four of these organisations used strengths-based interventions (the study group), whilst the rest of the sample (the control group) did not. The findings highlighted significantly higher levels of engagement for the study group compared to the control group (Page & Vella-Brodrick, 2008). Therefore, focusing on strengths is likely to have an effect on the bottom-line of companies.

Although it seems important to study the effectiveness of focusing on strengths, researchers have conducted limited empirical research on how employees perceive whether their organisations identify and use their strengths (Gable & Haidt, 2005). The available research appears to be mostly theoretical in nature and concerned with positive subjective experiences and positive individual characteristics rather than positive organisations and communities (Gable & Haidt, 2005). Furthermore, there is a strong need for empirical research, within the positive psychology paradigm, that has a specific emphasis on new interventions that contribute to the functioning of workplaces (Gable & Haidt, 2005). It is also important to investigate empirically the benefits, and the indications of who benefits most, when organisations focus on strengths.

The main limitation to reaching these goals is the lack of instruments that measure the perceptions of employees that their organisations focus on strengths. Although there are instruments and studies that aim to identify and describe individual strengths (like the Values in Action, Peterson & Seligman, 2004; and the Clifton Strengths Finder, Clifton & Harter, 2003), the authors could not identify any

instruments that measure whether employees perceive that their organisations focus on, use and apply their strengths in the *workplace*. These instruments are important in order to investigate the effects of organisations that focus on and use employees' strengths (where the effects could include work engagement, innovativeness, commitment and productivity). In order to address this gap, researchers developed a new scale to measure perceived organisational support for strength use (POSSU) (Els *et al.*, in press). However, the reliability and the validity of the new scale, in the South African context and specifically for employees in the banking sector, are not clear.

Therefore, the objectives of this study were to:

1. Determine the factorial validity and reliability of the newly developed POSSU scale in a sample of employees in the banking sector.
2. Investigate whether POSSU (as the newly developed scale measures it) is an independent job resource.
3. Determine the effect of POSSU on important outcomes (including burnout and engagement) whilst controlling for job resources and a deficiency-based approach (DBA).

Trends from the research literature

Conceptualising the strengths-based approach

A strength-based organisation is one that builds on employees' strengths, manages and develops them (Clifton & Harter, 2003). However, to build a strengths-based organisation, employees need to perceive that their organisations support them to use their strengths in their jobs.

According to Eisenberger, Huntington, Hutchison and Sowa (1986), perceived organisational support occurs when employees form global beliefs about the extent to which their organisations are committed to them, or, in other words, value their contributions and care about their well-being. These global beliefs form to meet the needs for praise and approval from their organisations and to infer their organisations' readiness to reward greater efforts to meet organisational goals. Furthermore, perceived organisational support will increase employees' affective attachment to their organisations and their expectation that their organisations will reward greater work effort (Eisenberger *et al.*, 1986). Using the principles of perceived organisational support, Eisenberger *et al.*, (1986) and Els *et al.*, (in press), define POSSU as the extent to which employees perceive that their organisations support them to use their strengths in the workplace.

Researchers widely accept organisational support as a job resource (Karatepe, 2009; Jackson, Rothmann & Van de Vijver, 2006; Rothmann, Mostert & Strydom, 2006). Job resources refer to those physical, psychological, social or organisational aspects of the job that:

1. are functional in achieving work goals
2. reduce job demands and their associated physiological and psychological costs

3. stimulate personal growth, learning, and development. (Demerouti & Bakker, 2011)

Organisations can locate job resources on different functional levels. These are the organisational level (organisational support, career opportunities, job security and remuneration); the interpersonal level (team culture, support from superiors and colleagues); the job level (role clarity and decision-making involvement); and the task level (autonomy, performance feedback and skill variety) (Demerouti & Bakker, 2011). One of the premises of the Job Demands-Resources (JD-R) model is that job resources educe a motivational process. One assumes that job resources have motivational potential and lead to positive outcomes like job-related learning, high work engagement, low cynicism, excellent performance and organisational commitment (Demerouti, Bakker, Nachreiner & Schaufeli, 2001; Salanova, Agut & Peiró, 2005; Taris & Feij, 2004).

Meijman and Mulder (1998) have ascertained that employees are more motivated to perform and work towards achieving goals when they have support in the form of available resources. Organisations that focus on employee strengths may facilitate motivation towards dedicated work procedures (Demerouti & Bakker, 2011). Research has also shown that strengths use is associated with goal attainment and performance (Clifton & Harter, 2003; Linley, Nielsen, Wood, Gillett & Biswas-Diener, 2010). Using strengths in the workplace can foster positive affect (Wood, Linley, Maltby, Kashdan & Hurling, 2011), thereby providing a buffer against stress (Folkman & Moskowitz, 2000; Khosla, 2006; Proctor *et al.*, 2010). Therefore, one can regard perceived organisational support for strengths use as a job resource at the organisational or macro-level. Consequently, one can see that it plays an extrinsic motivational role – organisations that support work environments that focus and use employees' strengths as well as provide opportunities for training to eradicate weaknesses.

The scale has its roots in the framework of two models: the Broaden-and-Build Theory of positive emotions (Fredrickson, 2004) and the happy-productive worker thesis (Cropanzano & Wright, 2001).

The broaden-and-build theory

Fredrickson's (2001) broaden-and-build theory suggests that organisations could create and develop positively charged emotions (Mills, 2010). This argument implies that the broaden-and-build theory could reinforce the development and use of interventions (Fredrickson, 1998; Fredrickson, 2001). In essence, this theory states that positive emotions increase the number of thoughts leading to a greater variety of actions that people could take, consequently broadening their thought-action repertoires (Fredrickson, 1998). Tugade and Fredrickson (2004) show that positive emotions lead to increasingly more positive emotions and ultimately create an upward spiral. This assists people to increase their resiliency levels and overall well-being (Fredrickson, 2001).

The broaden-and-build theory of positive emotions also assists organisations to realise the benefits positive emotions hold for them to flourish (Mills, 2010). Fredrickson (2001) shows that a positive orientation can act as a way to affect psychological growth and increase well-being. Trait features of happiness, with a specific emphasis on positive emotions, could promote long-term productivity (Zelenski, Murphy & Jenkins, 2008). Supportive working environments can foster and maintain positive emotions (Froman, 2009). Fredrickson (1998, 2001) also argues that positive emotions 'broaden and build' skills and relations – employees who experience positive moods are more accommodating, helpful and show lower levels of aggression (Isen & Baron, 1991). These characteristics are likely to lead to improved productivity in work contexts (Zelenski *et al.*, 2008).

The happy-productive worker thesis

Cropanzano and Wright (2001) developed the happy-productive worker thesis. It motivates a positive connection between positive affect and performance, which results from a series of motivational mechanisms, including heightened quality in relationships and social support. One can interpret these as job resources with extrinsic motivational roles. According to Deci and Ryan, these types of job resources could influence the achievement of work tasks (Deci & Ryan, 1985). Studies have shown a positive link between positive affectivity and job performance (Staw & Barsade, 1993; Wright & Staw, 1999). Adding evidence to the Happy-Productive Worker Thesis, research has shown connections between several measures of employee well-being (subjective) and those of job-related performance (Wright & Cropanzano, 2004). A study of Master of Business Administration (MBA) students supports the notion that high levels of well-being facilitate decision-making, interpersonal interaction and help them to achieve high performance ratings (Wright & Cropanzano, 2004). Employees who show signs of happiness in their work prove to be more productive and show higher levels of organisational citizenship behaviour and lower job withdrawal tendencies (Lyubomirsky, King & Diener, 2005).

Measurement of perceived organisational support for strengths use

Traditionally, practitioners have used popular instruments, like the values in action (VIA) (Peterson & Seligman, 2004) and the Gallup StrengthsFinder (Clifton & Harter, 2003), to identify individual strengths. The VIA was developed because of the failure of the Diagnostic and Statistical Manual (DSM) to identify what is right with people and only focused on psychopathologies (Boniwell, 2006). Peterson and Seligman (2004) say that the VIA focuses mainly on describing and classifying strengths and virtues that empower people to flourish. The Gallup organisation developed the StrengthsFinder instrument, which explores the nature of strengths in the organisational setting (Clifton & Harter, 2003). The developers of the StrengthsFinder were interested in the aspects that contribute to excellent individual performance in the work setting. Consequently, they interviewed top performers globally (Boniwell, 2006).

This resulted in the identification of 34 strengths. They viewed a talent as the foundation of a strength, compared to the VIA, which sees talents and strengths as separate constructs. They also explained the formation of a strength as the consequence of refining a talent.

Although the VIA and StrengthsFinder assist people to identify their strengths, it is necessary to investigate the consequences for organisations if they use employees' strengths. Researchers have conducted a search to identify instruments that attempt to measure whether employees perceive their organisations as supportive of using their strengths. They have identified two questionnaires, the Strengthspotting Scale and a Dutch questionnaire that Van Woerkom and Meyer (in press) developed.

The Strengthspotting Scale measures the ability to identify the strengths of others (Linley, Garcea, Minhas, Trenier & Willars, 2010). The initial item pool consisted of 58 items. Of these, 20 measured the big five dimensions of personality, 10 items measured optimism, 20 items measured positive affect and a further eight items measured the extent to which people realise their own strengths (Linley *et al.*, 2010). It uses a seven-point Likert scale, which ranges from 1 (strongly agree) to 7 (strongly disagree). The Strengthspotting Scale consists of five domains: ability (how good you are at identifying strengths); emotional (emotional reaction towards the identification of strengths); motivation (level of motivation to spot strengths); application (what to do when strengths have been identified); and frequency (how often strengthspotting is practised). All five domains showed very good internal consistency ($\alpha \geq 0.82$) (Linley *et al.*, 2010). However, this instrument does not measure the employees' perceptions of whether their organisations use their strengths. Instead, it measures the capabilities of the people who are likely to identify strengths in others.

The Dutch questionnaire, which Van Woerkom and Meyer (in press) developed, measures employees' perceptions of whether their organisations identify, use, develop and appreciate their strengths. This questionnaire is based on the Strengths Knowledge Scale (Govindji & Linley 2007), the Strengths Use Scale (Govindji & Linley, 2007), and the Gallup Workplace Audit (Harter *et al.*, 2002). Van Woerkom and Meyer (in press) developed the items in Dutch and later translated them into English. It measured the identification of strengths by using five items (like 'In this organisation I am made aware of my competencies'). Seven items gauge the development of strengths (like 'In this organisation I am stimulated to further develop my competences'). An additional seven items assessed the use of strengths (like 'In this organisation I get the opportunity to do what I am good at'). Six items evaluated the appreciation of strengths (like 'In this organisation I receive compliments for performing well'). It used a five-point Likert scale to plot responses from 1 (totally disagree) to 5 (totally agree). It used principal component analysis to explore the factor structure (Meyers, 2010). This showed that it could achieve a forced three-factor

solution. However, the eigenvalue of the first factor was 11.15. It explained 44.59% of the variance. This indicated that one significant factor underlies most of the items.

The newly developed perceived organisational support for strength use scale

The newly developed POSSU scale aimed to determine the perception employees have of whether their organisations support the use of their strengths (Els *et al.*, in press). This scale is primarily concerned with the *use* of employees' strengths. It typically asks participants about their perceptions of their organisations' role in using their strengths. The four steps that follow, as DeVellis (2003) observed, outlines the development of this new scale.

Initial construct conceptualisation

Drawing on the JD-R model, the designers conceptualised POSSU as a job resource. Els *et al.* (in press) define perceived organisational support for strengths use as the extent to which employees perceive that their organisations support them to use their strengths in the workplace.

Item generation

Considering the definition of POSSU, the developers developed new items by tapping into the literature on strengths use in the organisational context as well as the expert feedback of industrial psychologists, human resources specialists and leading researchers in the field of organisational psychology. They used the guidelines that DeVellis (2003) described to include items:

1. that reflected the purpose of the questionnaire and the constructs of interest
2. that were seemingly redundant to ensure that the content, which is common to the items of each dimension, will summate across items
3. in the item pool, a larger number than they intended to use in the final questionnaire (to reduce possible poor internal consistency)
4. that were not exceptionally lengthy
5. that had appropriate reading difficulty levels to ensure that participants from all language groups and education levels would understand them
6. that were clear and concise with no problematic wording
7. that had appropriate grammatical structures and word choices. (n.p.)

Scaling format

The developers chose a Likert-type response format because it is important to assess the opinions, beliefs and attitudes of participants (DeVellis, 2003; Roberts, Laughlin & Wedell, 1999). They worded the response options to signify roughly equal intervals with respect to agreement (DeVellis, 2003) and included a seven-point rating scale with seven categories (Fink, 1995; Foddy, 1994; Green & Frantom, 2002): 0 (almost never), 1 (rarely), 2 (occasionally), 3 (sometimes), 4 (frequently), 5 (usually) and 6 (almost always).

Item refinement and judgement

This phase included the revision of items by five Masters' students in industrial psychology. They had to classify the POSSU items, together with items from other scales (items that measure the deficiency-based approach, strengths-orientated behaviour and deficiency-orientated behaviour). They received a definition of the POSSU construct, had to place the items into the different construct categories and identify unclear or ambiguous items. Drawing from their findings, the developers refined the items and finally submitted them to an accredited language editor. Results led to the approval of eight items for the final POSSU scale.

Research design

Research approach

This study followed a quantitative, non-experimental design with a cross-sectional survey approach. Therefore, participants completed the questionnaire at one point in time.

Research method

Research participants

The authors used an availability sample of 165 participants from the banking sector. The participants came from different departments in one specific bank. Of the 376 questionnaires that the authors distributed amongst the seven different departments in the bank, respondents completed 165 questionnaires. This resulted in a response rate of 44%.

Table 1 presents the characteristics of the sample.

The sample consisted of English- (50.9%), Afrikaans- (20%), Setswana- (4.8%), isiXhosa- (5.5%), Xitsonga- (1.8%), isiZulu- (6.1%), Sesotho- (8.5%), isiNdebele- (.6%), Sepedi- (.6%) speaking participants and 1.2% speakers of other languages. The participants represented five ethnic groups: White people (29.1%), Black people (29.1%), Coloured people (30.9%), Asians (9.1%) and Others (1.8%). The participants were mostly between the ages of 26 and 36 (68.5%). Most of the participants were female (69.1%). Most participants (55.8%) had a Grade 12 qualification. In terms of household status, most participants indicated that they were married, or living with a partner, and had children living at home (38.8%). Most participants (67.3%) fell within the smart loans division. Most participants (78.2%) indicated that they had been working for the organisation for 10 years or fewer. In total, 153 (92.7%) participants indicated that they had been in the same position for 10 years or fewer.

Measuring instruments

Biographical questionnaires: The authors used biographical questionnaires to gather biographical information about the participants. The questionnaire included age, gender, home language, ethnicity, education level, marital and parental status, years of employment and years in the current position in the organisation.

Strength-based approach: The authors used the newly developed South African POSSU scale to measure employees' perceptions of their strength-use in their organisation. The POSSU scale consists of eight items, developed to measure employees' perceptions of the extent to which their organisations focus on using their strengths (Els *et al.*, in press). An example of an item is 'This organisation uses my strengths'. The scale uses a frequency-based response format scale: 1 (never), 2 (rarely), 3 (occasionally), 4 (sometimes), 5 (frequently), 6 (usually) and 7 (almost always).

TABLE 1: Characteristics of the participants.

Item	Category	f	%	
Gender	Male	51	30.9	
	Female	114	69.1	
Age	22 – 25 years	16	9.7	
	26 – 36 years	113	68.5	
	37– 47 years	26	15.7	
	48 – 58 years	10	6.1	
Home language	English	84	50.9	
	Afrikaans	33	20	
	Setswana	8	4.8	
	isiXhosa	9	5.5	
	Xitsonga	3	1.8	
	isiZulu	10	6.1	
	Sesotho	14	8.5	
	isiNdebele	1	.6	
	Sepedi	1	.6	
Other	2	1.2		
Race	Black	48	29.1	
	White	48	29.1	
	Coloured	51	30.9	
	Asian	15	9.1	
	Other	3	1.8	
Education	Grade 10	2	1.2	
	Grade 11	6	3.6	
	Grade 12	92	55.8	
	Technical college diploma	10	6.1	
	Technikon diploma	20	12.1	
	University degree	18	10.9	
	Post-graduate degree	17	10.3	
Department	Cellphone banking	1	.6	
	EasyPlan	3	1.8	
	eWallet	2	1.2	
	Life	2	1.2	
	Housing finance	1	.6	
	Smart Loans	111	67.3	
	Smart Transactional Banking	45	27.3	
	Household status	Single, without children living at home	26	15.8
		Single, with children living at home	26	15.8
Married or living with a partner, without children living at home		25	15.2	
Married or living with a partner, with children living at home		64	38.8	
Living with parents		10	6.1	
Missing		14	8.5	
Years in organisation	One month – 10 years	129	78.2	
	11 – 20 years	19	11.5	
	21 – 48 years	17	10.3	
Years in position	0 – 10 years	153	92.7	
	11 – 20 years	8	4.9	
	21 – 36 years	4	2.4	

f, frequency.

Job resources: The authors measured four other job resources with a questionnaire about the experience and assessment of work (Van Veldhoven, Meijman, Broersen & Fortuin, 1997). It includes supervisor support (four items, like 'Can you count on your superior when you come across difficulties in your work?'), autonomy (four items, like 'Can you decide on the content of your work activities yourself?'), information (four items, like 'Do you receive sufficient information on the results of your work?') and participation (four items, like 'Can you participate in decisions affecting issues related to your work?').

The authors rated all items on a Likert-response scale that ranged from 1 (never) to 4 (always). The Cronbach alpha coefficients for the four job resources were acceptable: $\alpha = .90$ for supervisor support; $\alpha = .81$ for autonomy; $\alpha = .89$ for information; and $\alpha = .87$ for participation (Van Veldhoven *et al.*, 1997).

Organisational deficiency-based approach

The authors used a newly developed questionnaire to measure organisational DBA (Els *et al.*, in press). They used a seven-point frequency scale, that ranges from 1 (never) to 7 (always). They measured organisational DBA using eight items (like, 'In this organisation my development plan aims to better my weaknesses'). Els *et al.* (in press) reported a Cronbach alpha coefficient of .93 for organisational DBA.

Burnout: The authors used the Maslach Burnout Inventory – General Survey (MBI-GS) (Schaufeli *et al.*, 1996) to measure burnout. They combined two subscales of the MBI-GS to measure burnout. These were Exhaustion (five items, like 'I feel used up at the end of the workday') and Cynicism (five items, like 'I have become less enthusiastic about my work'). They scored all items on a seven-point frequency-rating scale, ranging from 0 ('never') to 6 ('daily'). The Cronbach alpha coefficients that Schaufeli *et al.* (1996) reported varied from .87 to .89 for Exhaustion and .73 to .84 for Cynicism.

Engagement: The authors used the Utrecht Work Engagement Scale (UWES) to measure work engagement (Schaufeli, Salanova, González-Romá & Bakker, 2002). They used the core dimensions (vigour and dedication) of work engagement for this study. The questionnaire is scored on a seven-point frequency scale that varies from 0 ('never') to 6 ('everyday'). The authors used six items to measure vigour ('When I get up in the morning, I feel like going to work') and five items to measure dedication ('I find the work that I do full of meaning and purpose'). The Cronbach alpha coefficients range between .78 and .89 (Schaufeli *et al.*, 2002). Storm and Rothmann (2003) obtained the following alpha coefficients for the UWES in a sample of 2 396 members of the South African Police Service (SAPS): vigour: .78 and dedication: .89.

Research procedure

The authors collected their data using an electronic questionnaire. They delivered the questionnaire through

a secure website. It had a self-report format. They gave participants a detailed description of the purpose of the study. They assured the confidentiality of responses before the participants completed the questionnaire. They obtained the informed consent from the participants. It took participants an average of between 20 and 30 minutes to complete the questionnaire. The industrial psychologist and general managers of the respective organisational segments gave the authors authorisation to use the data for research purposes. The authors considered aspects like voluntary participation, informed consent, doing no harm, confidentiality and privacy to ensure fair, unbiased and ethical practices during the research process (Devous, 2002). Of the 376 questionnaires that the authors distributed amongst the seven different departments in the bank, participants completed 165 questionnaires. This yielded a response rate of 44%.

Statistical analysis

The authors performed their statistical analysis with the help of the SPSS programme (SPSS Inc., 2011). The POSSU Scale is a newly developed one. Therefore, the authors used exploratory factor analysis (EFA) to determine the factorial validity (Costello & Osborne, 2005; Henson & Roberts, 2006). They also used EFA to determine the underlying factor structure of the POSSU scale together with the other job resources (including supervisory support, autonomy, information and participation).

Researchers have shown concern about using eigenvalues greater than 1.0 in isolation to determine the number of underlying factors in a questionnaire (Floyd & Widaman, 1995; Zwick & Velicer, 1986). Therefore, the authors also examined scree plots to determine the number of factors to retain. Where eigenvalues and the scree plots indicated a one-factor model, the authors used the principal components (PC) extraction method. They used a principal-axis factoring approach with maximum likelihood extraction to explore the latent structure of the POSSU items together with the items of the other job resources. They followed this with orthogonal (Varimax) rotation methods, when the factors did not correlate, or oblique (direct oblimin) rotation methods when the factors did. They set the cut-off point for the factor loadings at .40 (Netemeyer, Bearden & Sharma, 2003).

The authors used Cronbach alpha coefficients to assess the reliability of the scales (Clark & Watson, 1995). They used product-moment correlation coefficients to investigate the nomological net between the POSSU subscales and other job resources. With regard to statistical significance, they decided to set the value at a 95% confidence level ($p \leq .05$). They used the effect size to decide on the practical significance of the findings (Steyn, 2002). They set cut-off points of .30 (medium effect) and .50 (large effect) to determine the practical significance of correlation coefficients (Cohen, 1988).

Results

Firstly, the authors examined the factorial validity of the new POSSU scale. Thereafter, they explored the underlying factor

structure and relationship of the POSSU items and the items of the other job resources.

Factorial validity of the newly developed perceived organisational support for strength use scale

The authors examined the factor structure of the newly developed POSSU scale using EFA. Examination of the eigenvalues and the scree plots showed that they could extract one factor. It explained 82.35% of the total variance.

Table 2 reports the factor loadings and communalities.

Table 2 shows that the items loaded strongly onto the POSSU factor. This suggests a clear one-factor construct. Factor loadings were all well above the cut-off point of .40 with accompanying strong communalities.

Exploratory factor analysis with perceived organisational support for strength use and other job resources

When the authors included the other job resources in the factor analysis, the eigenvalues and scree plots indicated that they should retain five factors. This accounted for 76.53% of

the total variance. The authors used principle axis factoring to extract the factors and a direct oblimin rotation.

Table 3 lists the items that comprise the five-factor model in order of the strength of their loadings.

The analysis in Table 3 confirms a clear five-factor solution. The five factors that the authors extracted included these dimensions:

- POSSU (eight items that explained 45.42% of the variance, measuring employees' perceptions of the extent to which their organisation focus on using their strengths).
- Supervisor Support (four items that explained 11.73% of the variance, measuring the experience and assessment of supervisor support at work).
- Autonomy (four items that explained 9.16% of the variance, measuring the experience and assessment of autonomy at work).
- Information (four items that explained 5.77% of the variance, measuring the experience and assessment of information at work).

TABLE 2: Factor loadings of the perceived organisational support for strength use scale (POSSU).

Item	Item text	Factor loadings	Communalities (h^2)
POSSU Item 1	This organisation uses my strengths	.79	.62
POSSU Item 2	This organisation allows me to do my job in a manner that best suits my strong points	.89	.78
POSSU Item 3	This organisation gives me the opportunity to do what I am good at	.93	.86
POSSU Item 4	This organisation allows me to use my talents	.94	.88
POSSU Item 5	This organisation ensures that my strengths are aligned with my job tasks	.93	.87
POSSU Item 6	This organisation makes the most of my talents	.94	.88
POSSU Item 7	This organisation applies my strong points	.91	.83
POSSU Item 8	This organisation focuses on what I am good at	.94	.87

TABLE 3: Pattern matrix for perceived organisational support for strength use (POSSU) and job resources.

Item	Factor					Communalities (h^2)
	POSSU	Supervisor support	Autonomy	Information	Participation	
POSSU 4	.95	.03	-.01	.06	.01	.56
POSSU 3	.94	.01	-.01	.02	.02	.77
POSSU 5	.94	.02	.05	.04	.05	.85
POSSU 6	.93	.03	.01	.09	-.04	.87
POSSU 8	.90	-.00	-.06	-.05	-.06	.86
POSSU 7	.85	.08	-.06	-.01	-.02	.87
POSSU 2	.82	-.08	.11	-.15	.05	.81
POSSU 1	.69	-.03	-.02	-.06	-.09	.87
Supervisor support 3	-.01	.93	-.02	.03	-.03	.39
Supervisor support 4	-.01	.87	.04	-.02	-.01	.50
Supervisor support 2	.01	.77	.10	-.05	-.02	.67
Supervisor support 1	.08	.68	-.01	-.04	.02	.63
Autonomy 5	.02	.04	.86	-.03	.14	.54
Autonomy 4	.04	.01	.74	.09	-.10	.71
Autonomy 2	-.01	.01	.56	-.06	-.19	.84
Autonomy 1	.04	.04	.50	-.04	-.13	.65
Information 3	-.01	-.12	.11	-.95	-.01	.64
Information 2	.11	-.00	.00	-.73	-.04	.86
Information 1	-.02	.20	-.11	-.69	-.08	.67
Information 4	.04	.28	.00	-.61	-.01	.46
Participation 3	-.05	.01	.07	.02	-.85	.73
Participation 2	.08	.00	-.02	.04	-.84	.73
Participation 4	.05	-.03	.09	-.13	-.64	.63
Participation 1	.05	.06	.00	-.06	-.60	.78

- Participation (four items that explained 4.45% of the variance, measuring the experience and assessment of participation at work).

It is also clear that the POSSU items loaded onto a separate factor, with no double loadings onto other factors.

Table 4 gives the means, standard deviations, internal consistencies and correlations between POSSU and job resources.

All the scales were reliable ($\alpha > .70$ (Nunnally & Bernstein, 1994)). More specifically, the authors found a Cronbach alpha of .97 for POSSU. This showed that the scale is internally consistent. Furthermore, the POSSU had positive relationships with the other four job resources. All these relationships were significant ($p \leq .01$) and of medium size, suggesting that there is no significant conceptual overlap between the constructs. This provides further support for the independent nature of the POSSU as an additional job resource. In addition, POSSU had similar relationships with burnout and engagement. There is a negative and statistically significant relationship between POSSU and burnout, whilst

there is a positive, statistically and practically significant relationship (of medium effect) between POSSU and engagement.

In order to determine whether POSSU has a significant effect on burnout and engagement, the authors performed two regression analyses. To see whether this effect holds when controlled for job resources and DBA, the authors included three steps. The first step included job resources, the second step DBA and the third step POSSU.

Table 5 shows that DBA was not a significant predictor of burnout, whilst POSSU, after controlling for job resources and DBA, significantly predicted burnout. With regard to engagement, DBA and POSSU were significant predictors of engagement. Therefore, POSSU predicted engagement, even after controlling for job resources and DBA.

Discussion

Researchers have designed many instruments to identify strengths and talents. However, few instruments measure

TABLE 4: Means, standard deviations and correlation coefficients between the dimensions.

Variable	Correlation coefficient			Dimensions						
	<i>M</i>	<i>SD</i>	α	1	2	3	4	5	6	7
1. POSSU	3.74	1.60	.97	-	-	-	-	-	-	-
2. DBA	3.20	1.52	.93	.50*	-	-	-	-	-	-
3. Support	3.35	.75	.90	.33*	.32*	-	-	-	-	-
4. Autonomy	2.75	.75	.81	.43*	.22*	.24*	-	-	-	-
5. Information	3.00	.85	.89	.51*	.53*	.49*	.32*	-	-	-
6. Participation	2.45	.77	.87	.48*	.35*	.32*	.53*	.50*	-	-
7. Burnout	2.54	1.42	.88	-.28*	-.22*	-.35*	-.13*	-.31*	-.14*	-
8. Engagement	4.35	1.27	.87	.49*	.45*	.35*	.27*	.44*	.36*	-.44*

POSSU, perceived organisational support for strength use scale; DBA, deficiency-based approach; *M*, mean; *SD*, standard deviation; α , Cronbach Alpha Coefficient. $r \geq .30$ is practically significant (medium effect); $r \geq .50$ is practically significant (large effect).

*, $p \leq .01$

TABLE 5: Multiple regression analysis with burnout and engagement as dependent variables.

Mode	Burnout							Engagement						
	Beta (β)	<i>t</i>	<i>p</i>	<i>F</i>	<i>R</i>	<i>R</i> ²	ΔR^2	Beta (β)	<i>t</i>	<i>p</i>	<i>F</i>	<i>R</i>	<i>R</i> ²	ΔR^2
1. (Constant)	-	8.78	.00	27.08*	.38	.15	.15	-	-12.50	.00	51.05	.49	.24	.24
Supervisor support	-.26	-6.12	.00*	-	-	-	-	.15	3.67	.00*	-	-	-	-
Autonomy	-.03	-.75	.46	-	-	-	-	.07	1.79	.07	-	-	-	-
Information	-.20	-4.42	.00*	-	-	-	-	.28	6.37	.00*	-	-	-	-
Participation	.07	1.54	.12	-	-	-	-	.14	3.02	.00*	-	-	-	-
2. (Constant)	-	8.75	.00*	22.23*	.39	.15	.003	-	-12.77	.00	52.80	.54	.29	.05
Supervisor support	-.26	-6.02	.00	-	-	-	-	.13	3.33	.00*	-	-	-	-
Autonomy	-.03	-.76	.45	-	-	-	-	.08	2.02	.04*	-	-	-	-
Information	-.17	-3.42	.00*	-	-	-	-	.15	3.34	.00*	-	-	-	-
Participation	.08	1.70	.09	-	-	-	-	.10	2.31	.02*	-	-	-	-
DBA	-.07	-1.60	.11	-	-	-	-	.27	6.75	.00*	-	-	-	-
3. (Constant)	-	8.75	.00*	21.5*	.41	.17	.02	-	-12.94	.00	51.97	.57	.33	.04
Supervisor support	-.25	-5.97	.00	-	-	-	-	.12	3.13	.00*	-	-	-	-
Autonomy	.01	.12	.90	-	-	-	-	.03	.70	.48	-	-	-	-
Information	-.14	-2.76	.01*	-	-	-	-	.11	2.45	.02*	-	-	-	-
Participation	.11	2.32	.02*	-	-	-	-	.06	1.41	.16	-	-	-	-
DBA	-.02	-.49	.63	-	-	-	-	.19	4.73	.00*	-	-	-	-
POSSU	-.18	-3.68	.00*	-	-	-	-	.25	5.84	.00*	-	-	-	-

t, *t*-statistic; *p*, statistical significance; *F*, *F*-statistic; *R*, square root of R-square (correlation between the observed and predicted values of the dependent variable); *R*², proportion of variance in the dependent variable explained by the independent variables; ΔR^2 , change in percentage variance explained by the next step in the model; DBA, deficiency-based approach; POSSU, perceived organisational support for strength use scale.

*, $p \leq .05$

whether employees perceive that their organisations use their strengths. For this reason, they developed a new POSSU scale. According to available knowledge, it is the first scale developed in the South African context that aims to measure whether employees perceive that their organisations use their strengths.

Development of the perceived organisational support for strength use scale

Researchers developed the POSSU scale from three models: the JD-R model (Demerouti & Bakker, 2011), the broaden-and-build theory of positive emotions (Fredrickson, 2004) and the happy-productive worker thesis (Cropanzano & Wright, 2001).

They developed the POSSU scale using a four-step process.

The first step was initial conceptualisation of POSSU. This clearly defined the concept as employees' perceptions of the extent to which the formal and informal policies, practices and procedures in their organisations focus on the use of their strengths.

Step two included item generation and evaluation. It categorised items into different categories of applicability. It eliminated irrelevant items and used the remaining items during step three. Step three re-evaluated and adopted items to fit the definition as best as was possible. It adapted some items. However, most items were newly developed. Five industrial psychology Masters' students then revised the items and divided them into different construct categories. This process also assisted to identify unclear items. A language editor then refined and checked the items. The final scale consisted of eight items.

Factorial validity and reliability of the perceived organisational support for strength use scale

Because of its new nature, researchers used exploratory factor analysis to determine the factorial validity of the newly developed POSSU scale (Costello & Osborne, 2005; Henson & Roberts, 2006). As expected, the resulting eigenvalues and the scree plots indicated that researchers could extract one factor. All eight items loaded strongly onto the one factor. This suggests a definite measurement of POSSU. With regard to the reliability of the new scale, the results showed a Cronbach alpha of .97, indicating good internal consistency for the scale.

Perceived organisational support for strength use scale as a job resource

Perceived organisational support for strength use scale as a job resource is a job resource (Els *et al.*, in press). Job resources are physical, psychological, social or organisational aspects of jobs that help organisations to achieve their goals and reduce job demands as well as their associated physiological and psychological costs. They also stimulate personal

growth, learning and development (Demerouti & Bakker, 2011). POSSU is an approach that increases the productivity of employees through a strengths focus (Stienstra, 2010). POSSU leads employees to experience positive emotions (Govindji & Linley, 2007) and a greater sense of authenticity and motivation to act (Elston & Boniwell, 2011). Job resources can also adopt intrinsic (fostering growth and development) and extrinsic (goal achievement) motivational roles (Deci & Ryan, 1985; Van den Broeck, Vansteenkiste, De Witte & Lens, 2008).

To find support that POSSU is an independent job resource, the authors conducted an exploratory factor analysis. It included other job resources (like supervisor support, autonomy, information and participation). The findings yielded a five-factor solution, where the POSSU items clearly loaded onto a separate factor (the authors found no double loadings onto other factors). In addition, correlations between the POSSU dimension and other job resources were positive. They ranged between .44 and .56, indicating no significant conceptual overlap between the dimensions.

Therefore, one can conclude that, in this sample, POSSU is a separate job resource.

It seems that, in this sample, the newly developed POSSU scale is a single factor construct. The results of this preliminary analysis support the possible use of the new scale because it seems validly and reliably to measure employees' perception of their organisations commitment to using their strengths in the banking sector. In addition, one can also conclude that one can regard POSSU as an independent job resource that could have important implications for outcomes like employee engagement and job satisfaction.

Therefore, the new POSSU scale could assist employees and their organisations to identify perceptions of strengths use in organisations. This study was a first attempt to establish good validity and reliability for the POSSU scale. It could lead to findings that are more accurate and lay the groundwork for future effective and consistent measurement of POSSU.

The effect on important outcomes

To determine whether POSSU had a significant effect on important outcomes, the authors regressed POSSU on burnout and engagement whilst controlling for job resources and DBA. The results showed that DBA was not significantly related to burnout ($\beta = -.02$), but was significantly related to engagement ($\beta = -.19$).

Perceived organisational support for strength use scale as a job resource was a significant predictor of burnout ($\beta = -.18$) and engagement ($\beta = -.25$), even when controlling for job resources and DBA. This finding seems to be consistent with previous research on the topic. Linley and Harrington (2006) showed that developing strengths leads to improved engagement, energy and motivation. It results in positive emotions, more resilience, creativity and better

work performance. This is consistent with other findings that showed a relationship between the development of employees' strengths and higher work engagement levels (Clifton & Harter, 2003; Harter *et al.*, 2002).

With regard to the relationship between POSSU and burnout, the authors could find no studies that test this relationship empirically. However, one could expect that employees who strive to use their strengths in the workplace will have higher resilience, cope better with stress and will be less vulnerable to burnout (Chan, 2009).

Furthermore, one can regard POSSU as a job resource and researchers know that job resources have a negative relationship with burnout (Demerouti *et al.*, 2001; Demerouti & Bakker, 2011).

Limitations of the study

Certain limitations of this study are worth mentioning.

The first is inherent in using an online technique to gather data. It was difficult to determine whether participants understood the questions correctly. It was also not possible for them to ask questions about the items whilst completing the scale (Carleton, 2009). Online questionnaires present challenges for researchers because they lose the control factor – researchers have little control over the completion and response rates of the participants.

Secondly, the authors used a self-report response style to gather data. This technique has been criticised because of the possible common method variance problem. However, research has shown that it is not a big problem (Semmer, Zapf & Grief, 1996; Spector, 1992). Self-reporting techniques hold many benefits, like providing meaningful information and being cost-effective in nature. Furthermore, self-reporting questionnaires tend to elicit self-perceived perceptions of the construct and not necessarily the true construct. This was ideal for this study.

The authors conducted this study in a South African bank. As a result, it is difficult to generalise the results of this study to the greater public and to other industries (Liao & Toya, 2009). Furthermore, this sample consisted of participants from a single bank. The bank may have a specific corporate culture that other organisations do not have. This culture could also constrain the response style of the employees and could lead to a specific distribution of responses that might differ from other groups.

The sample consisted of 165 participants. This sample was large enough to analyse the instrument. However, one needs to administer the scale to a larger sample to make significant cross-cultural comparisons.

Recommendations for future research

Despite these limitations, the current study holds important implications for future research and organisations.

Perceived organisational support for strength use scale as a job resource could have a profound effect on the banking sector and the way in which the employees function. Although it seems that the new POSSU scale is valid and reliable for this particular bank, future research should consider the effect of POSSU in a wider array of organisations (Liao & Toya, 2009).

Furthermore, one can investigate the tendencies of different organisations to use a strengths-use focus as well as whether employees perceive that their organisations support the use of their strengths. One should also administer the scale on a larger and more diverse sample in order to generalise the findings to the greater population.

In addition, one should compare the newly developed POSSU scale to other scales that measure similar aspects with regard to the use and identification of strengths. One could also use confirmatory factor analysis to confirm the underlying factor structure of the newly developed POSSU scale. Future studies should also evaluate the extent to which POSSU affects organisational outcomes (like productivity, engagement and job satisfaction).

Equivalence is a principal concern when one conducts cross-cultural research. One can only make meaningful comparisons between different race and language groups when one can compare the data from different cultural groups (Van de Vijver & Poortinga, 1997).

Bias is another important construct to consider for future research. Bias appears when the meaning of a score for a specific group is different from the meaning of the score for another group (Gregory, 1996). Equivalence and bias levels are related. The occurrence of bias causes a decrease in the level of equivalence (Vorster, Olckers, Buys & Schaap, 2005). Research conducted on equivalence and bias is important because the cultural values, attitudes and the leadership styles organisations adopt could influence how participants understand and complete the POSSU scale (Vorster *et al.*, 2005).

Recommendations for organisations

It is possible to make recommendations for organisations. As mentioned before, there has been limited research on how employees perceive whether their organisations identify and use their strengths. The available research appears to be theoretical and seems to focus more on positive individual characteristics than on organisational characteristics (Gable & Haidt, 2005). Future research on POSSU can concentrate on strengths use, specifically as it pertains to community and organisational functioning. Allowing employees to identify their perceptions of whether their organisations support the use of their strengths could lead to the adoption of more positive organisational approaches that could influence the functioning of both the employees and their organisations.

Organisations should become aware of the positive potential of supporting their employees' use of their strengths (Van

Woerkom & Meyer, in press). Some researchers say that using strengths relates to organisational citizenship behaviour and innovativeness. Consequently, it could add tremendous value to those organisations that rely on teamwork, supervisor and colleague support because POSSU helps all employees to perform optimally (Van Woerkom & Meyer, in press).

Furthermore, one can assess the specific rate at which performance and profits increase with the use of POSSU. This could lead to a return on investment study, which may further promote the implementation of POSSU. These studies could explain the many benefits that POSSU has for employees and their organisations and could identify who benefits most from POSSU.

Conclusion

In conclusion, it seems that, in this sample, the newly developed strengths-based approach scale (SBA) scale is a single factor construct. The results of this preliminary analysis support the potential use of the new scale because it appears to measure employees' perception of their organisations using an SBA in the banking sector validly and reliably.

In addition, one can conclude that one can regard an SBA as an independent organisational resource, which could have important implications for outcomes like employee engagement and job satisfaction.

Therefore, the new SBA scale can assist employees and organisations to identify perceptions of SBA in the organisation.

This study was a first attempt to establish good validity and reliability for the SBA scale. It could lead to findings that are more accurate with regard to this concept and lay the groundwork for effective and consistent measurement of the SBA in the future.

Acknowledgements

The material in this article is based on work that the National Research Foundation (NRF) supported. Any opinions, findings, conclusions or recommendations in this article are those of the author(s). Therefore, the NRF does not accept any liability for them.

Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them when they wrote this article.

Authors' contributions

E.M.K. (North-West University) wrote the manuscript as part of her Master's dissertation. K.M. (North-West University) was the project leader. K.M. (North-West University) was responsible for the experimental and project design, supervised the project and assisted with writing the article, the statistical analysis and interpreting the results.

References

- Boniwell, I. (2006). *Positive psychology in a nutshell* (2nd edn.). London: PWBC.
- Bouskila-Yam, O., & Kluger, A.N. (2011). Strength-based performance appraisal and goal setting. *Human Resource Management Review*, 21, 137–147. <http://dx.doi.org/10.1016/j.hrmr.2010.09.001>
- Buckingham, M., & Clifton, D. (2001). *Now, discover your strengths*. New York: Free Press.
- Carleton, E.L. (2009). *Happiness at work: Using positive psychology interventions to increase worker well-being*. Masters' dissertation. Saint Mary's University, Halifax, Nova Scotia.
- Chan, D.W. (2009). The hierarchy of strengths: Their relationships with subjective well-being among Chinese teachers in Hong Kong. *Teaching and Teacher Education*, 25, 867–875. <http://dx.doi.org/10.1016/j.tate.2009.01.010>
- Clark, L.A., & Watson, D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological Assessment*, 7(3), 309–319. <http://dx.doi.org/10.1037/1040-3590.7.3.309>
- Clifton, D.O., & Harter, J.K. (2003). Investing in strengths. In K.S. Cameron, B.J.E. Dutton, & C.R.E. Quinn (Eds.), *Positive organisational scholarship*. San Francisco: Berrett-Koehler Publishers.
- Cohen, J. (1988). *Statistical power analysis for the behavioural sciences* (Rev. edn.). Orlando, FL: Academic Press. <http://dx.doi.org/10.1002/bs.3830330104>
- Costello, A.B., & Osborne, J.W. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research, and Evaluation*, 10(7), 1–9.
- Cropanzano, R., & Wright, T.A. (2001). When a "happy" worker is really a "productive" worker: A review and further refinement of the happy-productive worker thesis. *Consulting Psychology Journal: Practice & Research*, 53, 182–199. <http://dx.doi.org/10.1037/1061-4087.53.3.182>
- Deci, E.L., & Ryan, R.M. (1985). *Intrinsic motivation and self-determination in human behaviour*. New York, NY: Plenum Press. PMID:3841237
- Demerouti, E., & Bakker, A.B. (2011). The job demands–resources model: Challenges for future research. *South African Journal of Industrial Psychology*, 37(2), 1–9.
- Demerouti, E., Bakker, A.B., Nachreiner, F., & Schaufeli, W.B. (2001). The job demands–resources model of burnout. *Journal of Applied Psychology*, 86, 499–512. <http://dx.doi.org/10.1037/0021-9010.86.3.499>, PMID:11419809
- DeVellis, R.F. (2003). *Scale development: Theory and application* (2nd edn.). Thousand Oaks, CA: Sage Publications. PMID:14558062
- Devous, D. (2002). *Surveys in social research*. Sydney: Routledge.
- Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*, 71(3), 500–507. <http://dx.doi.org/10.1037/0021-9010.71.3.500>
- Elston, F., & Boniwell, I. (2011). A grounded theory study of the value derived by women in financial services through a coaching intervention to help them identify their strengths and practice using them in the workplace. *International Coaching Psychology Review*, 6(1), 16–32.
- Els, C., Mostert, K., Van Woerkom, M., Rothmann, S. Jnr., & Bakker, A.B. (in press). Following a strength-based and deficiency-based approach: The development and psychometric properties of a new scale. *Journal of Managerial Psychology*.
- Fink, A. (1995). *How to sample in surveys*. Thousand Oaks, CA: Sage.
- Foddy, W. (1994). *Constructing questions for interviews and questionnaires: Theory and practice in social research*. Cambridge: Cambridge University Press.
- Floyd, F.J., & Widaman, K.F. (1995). Factor analysis in the development and refinement of clinical assessment instruments. *Psychological Assessment*, 7(3), 286–299. <http://dx.doi.org/10.1037/1040-3590.7.3.286>
- Folkman, S., & Moskowitz, J.T. (2000). Positive affect and the other side of coping. *American Psychologist*, 55(6), 647–654. <http://dx.doi.org/10.1037/0003-066X.55.6.647>, PMID:10892207
- Frederickson, B.L. (1998). What good are positive emotions? *Review of General Psychology*, 2, 300–319. <http://dx.doi.org/10.1037/1089-2680.2.3.300>, PMID:21850154
- Frederickson, B.L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, 56, 218–226. <http://dx.doi.org/10.1037/0003-066X.56.3.218>, PMID:11315248
- Frederickson, B.L. (2004). The broaden-and-build theory of positive emotions. *The Royal Society*, 359, 1367–1377.
- Froman, L. (2009). Positive psychology in the workplace. *Journal of Adult Development*, 17(2), 59–69. <http://dx.doi.org/10.1007/s10804-009-9080-0>
- Gable, S.L., & Haidt, J. (2005). What (and why) is positive psychology? *Review of General Psychology*, 9, 103–110. <http://dx.doi.org/10.1037/1089-2680.9.2.103>
- Govindji, R., & Linley, P.A. (2007). Strengths use, self-concordance and well-being: Implications for strengths Coaching and Coaching Psychologists. *International Coaching Psychology Review*, 2(2), 143–153.
- Green, K.E., & Frantom, C.G. (2002). *Survey development and validation with the Rasch model*. Paper presented at the International Conference on Questionnaire Development, Evaluation and Testing, Charleston, SC, 14–17 November.
- Gregory, R.J. (1996). *Psychological testing history, principles and applications*. (2nd edn.) Needham Heights, MA: Allyn & Bacon.

- Harris, A.H.S., & Thoresen, C.E. (2006). Extending the influence of positive psychology interventions into health care settings: Lessons from self-efficacy and forgiveness. *Journal of Positive Psychology, 1*(1), 27–36. <http://dx.doi.org/10.1080/17439760500380930>
- Harter, J.K., Schmidt, F.L., & Hayes, T.L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: A meta-analysis. *Journal of Applied Psychology, 87*, 268–279. <http://dx.doi.org/10.1037/0021-9010.87.2.268>, PMID:12002955
- Henson, R.K., & Roberts, J.K. (2006). Use of exploratory factor analysis in published research: Common errors and some comments on improved practice. *Educational and Psychological Measurement, 66*, 393–416. <http://dx.doi.org/10.1177/0013164405282485>
- Isen, A.M., & Baron, R.A. (1991). Positive affect as a factor in organisational behaviour. In B.M. Staw & L.L. Cummings (Eds.), *Research in organisational behaviour* (pp. 1–53). Greenwich, CR: JAI Press.
- Jackson, L.T.B., Rothmann, S., & Van de Vijver, F.J.R. (2006). A model of work-related well-being for educators in South Africa. *Stress and Health, 22*(4), 263–274. <http://dx.doi.org/10.1002/smi.1098>
- Karatepe, O.M. (2009). An investigation of the joint effects of organizational tenure and supervisor support on work-family conflict and turnover intentions. *Journal of Hospitality and Tourism Management, 16*(1), 73–81. <http://dx.doi.org/10.1375/jhtm.16.1.73>
- Khosla, M. (2006). Positive affect and coping with stress. *Journal of the Indian Academy of Applied Psychology, 32*(3), 185–192.
- Liao, H., & Toya, K. (2009). Do they see eye to eye? Management and employee perspectives of high-performance work systems and influence processes on service quality. *Journal of Applied Psychology, 94*(2), 371–391. <http://dx.doi.org/10.1037/a0013504>, PMID:19271796
- Linley, P.A., Govindji, R., & West, M.A. (2007). Positive psychology approaches to public services leadership: An introduction to strengths-based leadership. *The International Journal of Leadership in Public Services, 3*(4), 44–55.
- Linley, P.A., Garcea, N., Hill, J., Minhas, G., Trenier, E., & Willars, J. (2010). Strengthspotting in coaching: Conceptualisation and development of the Strengthspotting Scale. *International Coaching Psychology Review, 5*(2), 165–176. <http://dx.doi.org/10.1108/17479886200700029>
- Linley, P.A., & Harrington, S. (2006). Strengths coaching: A potential-guided approach to coaching psychology. *International Coaching Psychology Review, 1*(1), 37–46.
- Linley, P.A., Nielsen, K.M., Wood, A.M., Gillett, R., & Biswas-Diener, R. (2010). Using signature strengths in pursuit of goals: Effects on goal progress, need satisfaction, and well-being, and implications for coaching psychologists. *International Coaching Psychology Review, 5*(1), 8–17.
- Lyubomirsky, S., King, L., & Dienier, E. (2005). The benefits of frequent positive affect: Does happiness lead to success? *Psychological Bulletin, 131*(6), 803–855. <http://dx.doi.org/10.1037/0033-2909.131.6.803>, PMID:16351326
- Meijman, T.F., & Mulder, G. (1998). Psychological aspects of workload. In: P.J.D. Drenth & H. Thierry (Eds.), *Handbook of Work and Organisational Psychology* (pp. 5–33). Hove: Psychology Press.
- Meyers, M.C. (2010). *Strengths-based development and its influence on positive emotions, employee innovativeness and organizational citizenship behaviour*. Unpublished masters' thesis. Tilburg University, Tilburg, The Netherlands.
- Mills, M.J. (2010). *Rethinking the hedonic treadmill within the context of broaden-and-build theory: Developing resources through positive employees*. Published dissertation, Kansas University, Kansas, United States of America.
- Minhas, G. (2010). Developing realised and unrealised strengths: Implications for engagement, self-esteem, life satisfaction and well-being. *Assessment and Development Matters, 2*(1), 1216.
- Netemeyer, R., Bearden, W., & Sharma, S. (2003). *Scaling procedures: Issues and applications*. Thousand Oaks, CA7 Sage.
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd Ed.). New York: McGraw-Hill.
- Proctor, C.L., Maltby, J., & Linley, P.A. (2010). Strengths use as a predictor of wellbeing and health-related quality of life. *Journal of Happiness Studies, 11*(1), 1–17. <http://dx.doi.org/10.1007/s10902>
- Page, K.M., & Vella-Brodrick, D.A. (2008). *The 'What', 'Why' and 'How' of employee well being: A new model*. Published masters' dissertation. Monash University, Caulfield, Australia.
- Peterson, C., & Seligman, M.E.P. (2004). *Character, strengths and virtues: A handbook and classification*. New York, NY: Oxford University Press.
- Roberts, J.S., Laughlin, J.E., & Wedell, D.H. (1999). Validity issues in the Likert and Thurstone approaches to attitude measurement. *Educational and Psychological Measurement, 59*(2), 211–233. <http://dx.doi.org/10.1177/00131649921969811>
- Roberts, L.M., Spreitzer, G., Dutton, J., Quinn, R., Heaphy, E., & Barker, B. (2005). How to play to your strengths. *Harvard Business Review, 83*(1), 74. PMID:15697115
- Rothmann, S., Mostert, K., & Strydom, M. (2006). A psychometric evaluation of the job demands-resources scale in South Africa. *SA Journal of Industrial Psychology, 32*(4), 1–11. (DOE) <http://dx.doi.org/10.4102/sajip.v32i4.239>
- Salanova, M., Agut, S., & Peiró, J.M. (2005). Linking organizational resources and work engagement to employee performance and customer loyalty: The mediation of service climate. *Journal of Applied Psychology, 90*, 1217–1227. <http://dx.doi.org/10.1037/0021-9010.90.6.1217>, PMID:16316275
- Schaufeli, W.B., Leiter, M.P., Maslach, C., & Jackson, S.E. (1996). MBI-General Survey. In C. Maslach, S.E. Jackson, & M.P. Leiter (Eds.), *Maslach Burnout Inventory Manual* (3rd ed.). Palo Alto, CA: Consulting Psychologists Press. PMID:8565541
- Schaufeli, W.B., Salanova, M., González-Romá, V., & Bakker, A.B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies, 3*, 71–92. <http://dx.doi.org/10.1023/A:1015630930326>
- Seligman, M.E.P., Steen, T.A., Park, N., & Peterson, C. (2005). Positive psychology progress: Empirical validation of interventions. *American Psychologist, 60*, 410–421. <http://dx.doi.org/10.1037/0003-066X.60.5.410>, PMID:16045394
- Semmer, N., Zapf, D., & Grief, S. (1996). Shared job strain: A new approach for assessing the validity of job stress measurements. *Journal of Occupational and Organizational Psychology, 69*, 293–310. <http://dx.doi.org/10.1111/j.2044-8325.1996.tb00616.x>
- Spector, P.E. (1992). A consideration of the validity of meaning of self-report measures of job conditions. In C.L. Cooper & L.T. Robertson, (Eds.), *International Review of Industrial and Organizational Psychology* (pp. 281–328). Chichester: Wiley.
- Stienstra, M. (2010). *Strength based development as organizational approach* (Unpublished masters' thesis). University of Tilburg, Tilburg, Netherland.
- Storm, K. & Rothmann, S. (2003). A psychometric analysis of the Utrecht Work Engagement Scale in the South African Police Service. *South African Journal of Industrial Psychology, 29*(4), 62–70.
- Smedley, T. (2007). The powers that BAE. *People Management, 13*(22), 40–43.
- SPSS Inc. (2011). *SPSS 20.0 for Windows*. Chicago, IL: SPSS Inc.
- Stefanyszyn, K. (2007). Norwich Union changes focus from competencies to strengths. *Strategic HR Review, 7*, 10–11.
- Staw, B.M., & Barsade, S.G. (1993). Affect and managerial performance: A test of the sadder-but-wiser vs. happier-and-smarter hypotheses. *Administrative Science Quarterly, 38*(2), 304–331. <http://dx.doi.org/10.2307/2393415>
- Steyn, H.S. (2002). Practically significant relationships between two variables. *South African Journal of Industrial Psychology, 28*(3), 10–15.
- Taris, T.W., & Feij, J.A. (2004). Learning and strain among newcomers: A three-wave study on the effects of job demands and job control. *Journal of Psychology, 138*, 543–563. <http://dx.doi.org/10.3200/JRPL.138.6.543-563>, PMID:15612610
- Trinka, K. (2004). What's a manager to do? Retrieved April 13, 2011, from the world wide web <http://pnwbc.com/PDF/whats-a-manageto-do.pdf>
- Tugade, M.M., & Fredrickson, B.L. (2004). Resilient individuals use positive emotions to bounce back from negative emotional experiences. *Journal of Personality and Social Psychology, 86*, 320–333. <http://dx.doi.org/10.1037/0022-3514.86.2.320>, PMID:14769087
- Van den Broeck, A., Vansteenkiste, M., De Witte, H., & Lens, W. (2008). Explaining the relationship between job characteristics, burnout, and engagement: The role of basic psychological need satisfaction. *Work and Stress, 22*(3), 277–294. <http://dx.doi.org/10.1080/02678370802393672>
- Van de Vijver, F.J.R. & Poortinga, Y.H. (1997). Towards an integrated analysis of bias in cross-cultural assessment. *European Journal of Psychological Assessment, 13*, 29–37. <http://dx.doi.org/10.1027/1015-5759.13.1.29>
- Van Veldhoven, M., Meijman, T.F., Broersen, J.P.J., & Fortuin, R.J. (1997). *Handleiding VBBA: Onderzoek naar de beleving van psychosociale arbeidsbelasting en werkstress met behulp van de vragenlijst beleving en beoordeling van de arbeid* [Manual VBBA: Research on the experience of psychosocial workload and job stress by means of the Questionnaire on the Experience and Evaluation of Work]. Amsterdam: SKB.
- Van Woerkom, M., & Meyer, C. (in press). Making happy and unhappy workers flourish: The effects of a strength-based approach. Paper submitted for publication.
- Vorster, M., Olckers, C., Buys, M.A., & Schaap, P. (2005). The construct equivalence of the Job Diagnostic Survey for diverse South African cultural groups. *South African Journal of Industrial Psychology, 31*(1), 31–37
- Wood, A.M., Linley, A.P., Maltby, J., Kashdam, T.B., & Hurling, R. (2011). Using personal and psychological strengths leads to increases in well-being over time: A longitudinal study and the development of the strengths use questionnaire. *Personality and Individual Differences, 50*(1), 15–19. <http://dx.doi.org/10.1016/j.paid.2010.08.004>
- Wright, T.A., & Cropanzano, R. (2004). The role of psychological well-being in job performance: A fresh look at an age-old quest. *Organizational Dynamics, 33*(4), 338–351. <http://dx.doi.org/10.1016/j.orgdyn.2004.09.002>
- Wright, T.A., & Staw, B.M. (1999). Affect and favourable work outcomes: Two longitudinal tests of the happy productive worker thesis. *Journal of Occupational Health Psychology, 20*(1), 1–23.
- Zelenski, J.M., Murphy, S.A., & Jenkins, D.A. (2008). The happy-productive worker thesis revisited. *Journal of Happiness Studies, 9*(4), 521–537. <http://dx.doi.org/10.1007/s10902-008-9087-4>
- Zwick, W., & Velicer, W. (1986). Comparison of five rules for determining the number of components to retain. *Psychological Bulletin, 99*, 432–442. <http://dx.doi.org/10.1037/0033-2909.99.3.432>