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THE VALIDATION OF THE PERCEIVED WELLNESS SURVEY IN THE SOUTH AFRICAN POLICE SERVICE

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ABSTRACT

The objectives of this study were to assess the validity and reliability of a Setswana translation of the Perceived Wellness Survey (PWS) in the South African Police Service and to investigate differences in the perceived wellness of police members, based on gender, qualification, age and rank. A cross-sectional survey design with an accidental sample (N = 673) of Setswana speaking police personnel was used. The Perceived Wellness Survey (PWS) and a biographical questionnaire were administered. Two reliable factors, namely wellness and unwellness, were extracted in a random sample (n = 335) and in a replication sample (n = 338). However, an alternative interpretation was also possible. Statistically significant differences were found between perceived wellness of employees in terms of age and rank.

Key words: Perceived wellness, validity, reliability, Setswana

In examining the prevailing views of what constitutes health, it appears that the definition of health remains the absence of disease and does not include a focus on the presence of positive states. Nelson and Simmons (2003) attribute this tendency to the fact that medicine was long concerned with only the physical body and the return of the physical body from disease states back to normal functioning. According to StrŸmpfer (1990), the health and social sciences have been characterised by a pathogenic paradigm, i.e. an orientation towards the abnormal. Adams, Bezner and Steinhardt (1997) pointed out that inexplicable phenomena such as the placebo effect and diseases that spontaneously go into remission support the notion that many factors which influence health are simply unknown. Furthermore, there is a lack of tools to fully describe human health and wellness.

In contrast with the pathogenic paradigm, is the positive psychology paradigm, which is about valued subjective experiences; well-being, contentment and satisfaction, hope and optimism, and flow and happiness (Seligman & Csikszentmihalyi, 2000). Positive functioning consists of the multidimensional constructs of psychological well-being and social well-being (Keyes, 1998; Ryff & Singer, 2000). Seligman (2002) suggested that the goal of positive psychology is to "learn" how to build the qualities that help individuals and communities not just to endure and survive, but also to flourish. Lindley and Joseph (2004) found that well-being goes beyond the absence of ill-health and includes aspirations to learn, being reasonably independent and possessing confidence. Two general lines of well-being research have involved the examination of emotional well-being and dimensions of positive functioning in terms of psychological well-being and social well-being (Keys & Magyar-Moe, 2003).

The acceptance of a wellness perspective in the workplace can have a salutary effect on organisational life. This fact is of direct importance for employers: Individuals with numerous risk factors for disease tend to be higher-cost employees in terms of health care. Employees who adopt a healthy lifestyle are likely to be healthier, raise healthy families and have lower medical costs, while also being more productive (Jandeska & Zapack, 2003). Therefore, it is necessary to study the perceived wellness of employees (Rothmann, 2003). However, Van Wyk, Boshoff and Owen (1999) stated that it is risky to apply an instrument developed in a country other than South Africa without re-validating the instrument. Therefore, it is important to obtain a valid and reliable measuring instrument of wellness in South Africa.

To ensure accurate assessment of the wellness of employees, it is necessary to use a valid and reliable measuring instrument. Research by Adams et al. (1997) showed that the Perceived Wellness Survey (PWS) has acceptable psychometric properties and that it provides an acceptable conceptualisation of perceived wellness. No studies were found regarding the psychometric properties of the PWS in South Africa. Therefore, this study aimed to investigate the validity and reliability of the PWS in the SAPS and to investigate differences in the perceived wellness of police members, based on gender, qualification, age and rank. Through this study a better understanding of perceived wellness would be gained, especially within the SAPS.

Wellness

Ryff and Singer (1998) traced philosophical writings of wellness and concluded that the key dimensions in life central to positive mental health are having purpose in life, quality connections to others, self-regard and mastery. Ryff and Singer define human well-being as a multi-dimensional process that involves intellectual, social, emotional and physical health. This definition implies that health is regarded as the presence of the positive in the mind as well as in the body. This view is also consistent with the holistic model of health, which posits six dimensions of wellness, namely emotional, intellectual, spiritual, occupational, social and physical (Quick & Tetrick, 2003).

Reardon (1998, p. 117) defines wellness as "a composite of physical, emotional, spiritual, intellectual, occupational and social health; health promotion is the means to achieve wellness." Wellness goes beyond the fixed idea of health as an absence of illness. It implies a proactive stance towards achieving optimal physical, mental and emotional well-being. Complete health is the absence of physical and mental morbidity and the presence of sufficient levels of physical and mental well-being. Incomplete health or unwellness reflects either high levels of physical health and well-being but poor mental health (high morbidity or low well-being), or high levels of mental health and well-being but poor physical health (high morbidity or low well-being); being completely unhealthy reflects high physical and mental morbidity and low physical and mental well-being (Keyes, 2002). Psychological well-being refers to the achievement of one's full psychological potential (Carr, 2003) and engagement with the existential challenges of life (Lindley & Joseph, 2004) whereas emotional well-being is an excess of positive over negative feelings and personal psychological functioning is the presence of more positively than negatively perceived self-attributes, such as personal growth (Keyes, 2002).

Meyers, Sweeney and Witmer (2000) define wellness as a way of life oriented towards optimal health and well-being in which body, mind and spirit are integrated by the individual to live more fully within the human and natural community. For employees to experience wellness, they must be encouraged to grow as human beings – through awareness campaigns and targeted education programmes. Keyes (2002) hypothesised complete mental health to be a bipolar continuum, varying from flourishing to languishing. In *flourishing*, an individual experiences high levels of positive emotion and also functions well both psychologically and socially. *Languishing* refers to emptiness, stagnation and a life of despair. Keyes (2002) operationalised this continuum by means of questions on psychological, social and emotional well-being. Psychological well-being includes self-acceptance, personal growth, purpose in life, environmental mastery, autonomy and positive relations with others. Social well-being refers to social acceptance, social actualisation, social contribution, social coherence and social integration. Emotional well-being includes positive affect, negative affect, life satisfaction and happiness.

Perceived wellness

In this study, the focus was on perceived wellness. Perceived wellness is a multidimensional, salutogenic construct which should be conceptualised, measured and interpreted consistent with an integrated systems view (Adams et al., 1997). Perceived wellness is defined as the sense that one is living in a manner that permits the experience of consistent, balanced growth in the emotional, intellectual, physical, psychological, social and spiritual dimensions of human existence. Wellness is never static; it is about balance among the dimensions, and constantly fluctuating and living in a way that attenuates the size of those fluctuations. In their study, Adams, Bezner, Garner and Woodruff (1998) found that individuals who score high on perceived wellness are physically more healthy, have a greater sense of meaning and purpose in life, expect that positive things will occur in their lives, no matter what the circumstances, are more connected with family or friends, are more secure and happy with who they are, and are intellectually vibrant.

When studying wellness, it is essential to rely on an individual's own perspective. It would make little sense to pronounce that a particular person is happy unless that person thought so himself or herself. One way to identify whether individuals are living well is to ask them. In addition, perceptions of health seem to represent an integration of health concepts and are among the best predictors of general medical and mental health. Subjective well-being is individuals' assessment of their lives. Research found that subjective well-being is multi-factorial and multi-dimensional (Keys & Magyar-Moe, 2003).

Because most wellness measures address clinical, physiological or behavioural manifestations of disease or risk factors, the Perceived Wellness Survey (PWS) is unique and the focus on perception is important for several reasons. Firstly, subjective perceptions are valid indicators of future objective health. Secondly, perception forms the basis of cognitive restructuring and lies at the core of several health theories and models. Thirdly, various research findings support the importance of wellness perceptions (Adams et al., 1997; Adams, Bezner, Drabbs, Zambarano & Steinhardt, 2000).

The perceived wellness model is founded in systems theory and the salutogenic orientation. According to the systems theory, each part of a system is both an essential sub-element of a larger system and an independent system with its own sub-elements. Elements are reciprocally interrelated such that disruption of homeostasis at any level requires adaptation of the entire system. Individual wellness involves an integrated method of functioning, suggesting reciprocal integration (Adams et al., 1997). At the individual level, this implies simultaneous functioning in multiple dimensions and at various levels within them (see Figure 1). To best describe and predict individual wellness, models should include several dimensions that are operationalised and interpreted consistent with the systems approach (Adams et al., 1997). Salutogenesis is suggested in the World Health Organization (1964, p. 1) definition of health as "complete physical, mental and social well-being and not merely the absence of disease." Wellness is widely recognised as the conceptual anchor of a salutogenic orientation (Adams et al., 1997).

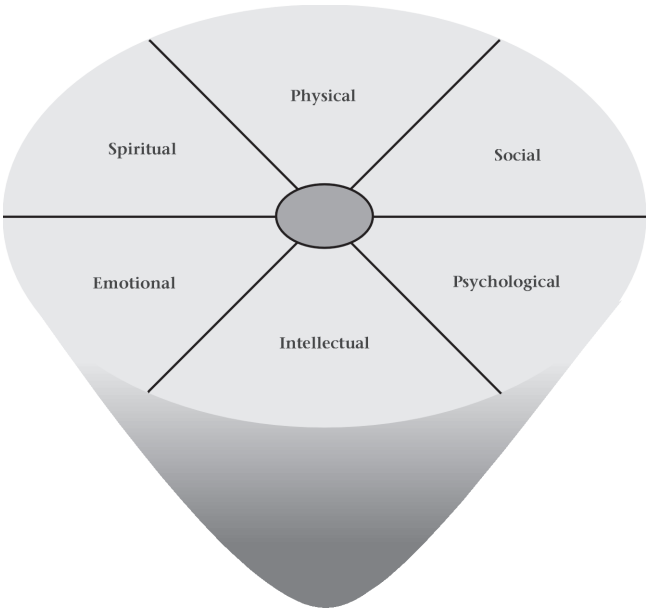

Figure 1: The perceived wellness model (Adams, 1997)

According to Adams et al. (1997), practitioners and researchers could focus on the salutogenic pole of each dimension represented by the perimeter of Figure 1 by measuring wellness perceptions which typically precede observable symptoms. The model in Figure 1 incorporates vertical and horizontal directions. Vertical movement occurs between the illness and wellness poles, whereas horizontal movement is the dynamic, balance-seeking force along each dimension of wellness. The top of the model in Figure 1 represents wellness because it is extended to the fullest possible extent, whilst the tightly constricted bottom represents illness. In between are combinations of wellness in several dimensions and the various states of balance among them. The definitions of the components of perceived wellness are given in Table 1 (Adams et al., 1997).

TABLE 1
DEFINITIONS OF COMPONENTS IN THE PWS

Component	Definition and Findings
Physical wellness	A positive perception and expectation of physical health.
Spiritual wellness	A belief in a unifying force between the mind and body or a positive perception of meaning and purpose in life.
Psychological wellness	A general perception that one will experience positive outcomes to the events and circumstances of life.
Social wellness	The perception of having support available from family or friends in times of need and the perception of being a valued support provider.
Emotional wellness	The possession of a secure self-identity and a positive sense of self-regard. Self-identity refers to one's internal image of oneself, whilst self-regard is the value placed on self-identity (i.e. the extent to which one values and likes oneself).
Intellectual wellness	The perception of being internally energised by an optimal amount of intellectually stimulating activity.

Adams et al. (1997, 1998, 2000) used the PWS as a measure of perceived health. The PWS is a salutogenically oriented, multidimensional measure of perceived wellness perceptions in the physical, spiritual, psychological, social, emotional and intellectual dimensions. Sample items from each dimension are respectively: "I expect to always be physically healthy," "I believe there is a real purpose to my life", "In the past, I have expected the best", "My friends will be there for me when I need help," "In general, I feel confident about my abilities," and "In the past, I have generally found intellectual challenges to be vital to my overall well-being." Each dimension is represented by six items. The dimensional scores are integrated by combining the magnitude or mean of each dimension with the balance of or the standard deviation among dimensions into a composite wellness score.

Initially, a total of 69 content-related items from six separate scales were combined to form the PWS, which was piloted several times. Three item-reduction schemes were employed. After the six best items had been selected to represent the physical, psychological, spiritual, emotional and social dimensions, six items written by the authors were added to represent the intellectual dimension. Ultimately, six items were included for each of the six dimensions, giving the PWS a total of 36 items. In an attempt to minimise item-order effects, the dimension order was randomly shuffled, creating six blocks. The items were then placed into each block so that each dimension was represented by every sixth item and so that the 21 positive and 15 negative items were spread evenly throughout.

The PWS fills a void in perceived health research and demonstrates potential utility as a research tool. The PWS was introduced as a multi-faceted measure of perceived health. As recommended, the PWS integrates several components of perceived wellness by simultaneously accounting for the magnitude of each and the balance among them. In four pilot studies, the PWS demonstrated evidence of convergent validity (r = 0,37 to 0,56) and internal consistency (α = 0,89 to 0,91). In the samples considered independently, total scale internal consistency ranged from 0,88 to 0,93. The internal validity of the total scale was demonstrated by a high percentage of items (90%), with an item to total scale correlation higher than 0,30 in the four samples considered independently. The PWS, as a multi-faceted measure of wellness perceptions, has shown early promise as a useful and psychometrically sound scale.

Perceived wellness and biographical variables

It is apparent that wellness is not experienced uniformly by police members, but varies from one individual to another (Dworkin, Haney, Dworkin & Telschow, 1990; Worrall & May, 1989). Studies have provided evidence that individual personality traits, for example, locus of control and type A personality, play substantial roles in well-being (Cooper, Kirkcaldy & Brown, 1994; Davey, 1994; Wilson, Mutero, Doolabh & Herzstein, 1990). However, reported studies of wellness, concerned with biographical differences such as position and years of service, do not appear to have been as fruitful. For example, after conducting a meta-analysis of studies investigating the relationship between gender and occupational stress, Martocchio and O'Leary (1989) concluded that there were no differences in experienced stress between males and females. It may be that there is virtually no variation in wellness among biographically differentiated groups of police members. However, such homogeneity, particularly in a large organisation, would appear unlikely.

Wissing and Van Eeden (2002) found clear differences between young and older individuals on various indices of psychological well-being. Based on these results, younger police members could be expected to experience lower levels of perceived wellness than older individuals. Age is also the one variable that has been most consistently related to negative aspects of well-being (Schaufeli & Enzmann, 1998).

Wissing and Van Eeden (2002) found significant differences between the well-being of males and females. Hobfoll (1989) argued that women may have less access to resources that could help buffer the negative effects of stress and maintain wellness. Therefore, female police members might experience lower levels of perceived wellness than male members. Some studies show higher burnout for women, some show higher scores for men, and others found no difference at all (Johnson, 1991).

In a study of suicide ideation in South Africa, Pienaar and Rothmann (2005) showed that police members who measured high on suicide ideation had the rank of constable or sergeant and had educational qualifications lower than Grade 12. Police members with the rank of constable and sergeant (and especially those with lower qualifications) might find it difficult to cope with the conditions in the SAPS, which is a conflict-prone organisation because of the transformation that is taking place. These police members probably lack alternative employment opportunities as well as opportunities for advancement (Pienaar & Rothmann, 2003).

Aims of this study

The aims of this study were to assess the reliability and factorial validity of a Setswana translation of the PWS in a sample of SAPS employees and to investigate differences in the perceived wellness of SAPS employees based on gender, age, qualifications and rank.

RESEARCH DESIGN

Research approach

A cross-sectional survey design was used in this study. Questionnaires were used to gather data in a non-random field survey.

Research method

Participants

Participants were 673 staff members from multiple divisions in the SAPS in the Marico Area, North West Province, including functional members as well as personnel appointed in terms of the Public Service Act personnel. Descriptive information of the sample is given in Table 2.

Measuring instruments

The Perceived Wellness Survey was used in this study and biographic information regarding age, qualification, gender, language, workplace, type of work, rank, years in the SAPS and marital status was gathered.

The *Perceived Wellness Survey* (PWS) (Adams et al., 1997) is a salutogenically oriented, multidimensional measure of perceived wellness perceptions in the physical, spiritual, psychological, social, emotional and intellectual dimensions. Each dimension is represented by six items that are scored from 1 (*very strongly disagree*) to 6 (*very strongly agree*) (Adams et al., 1998). The PWS composite score is the sum of the subscales' means divided by a denominator that includes the standard deviation among subscales. The dimensional scores are integrated by combining the magnitude or mean of each dimension with the balance or the standard deviation among dimensions into a wellness composite score. In four pilot studies, the PWS demonstrated evidence of convergent validity (r = 0,37 to 0,56) and internal consistency (α = 0,89 to 0,91). Research by Adams et al. (1997) has shown that the PWS scale possesses adequate reliability (α = 0,88 – 0,93) and several types of validity.

The PWS was translated into Setswana for purposes of this study. Firstly, it was translated from English into Setswana by language experts. Secondly, the Setswana version of the PWS were translated back into English. Thirdly, the translation and back-translation were compared and inconsistencies resolved.

TABLE 2
CHARACTERISTICS OF THE PARTICIPANTS (N = 840)

Item	Category	Frequency	Percentage
Gender	Male	535	63,7
	Female	303	36,1
	Omitted	2	0,2
Race	Black	827	98,5
	White	7	0,8
	Coloured	1	0,1
	Omitted	5	0,6
Qualifications	Less than grade 12	149	17,7
	Grade 12	492	58,6
	1-2 year Diploma	62	7,4
	3 3-year degree	117	13,9
	Omitted	20	2,4
Marital Status	Single/Widow/Widower	328	39,0
	Married/Remarried	443	52,7
	Divorced/Separated	64	7,6
	Omitted	5	0,6
Age	30 years and younger	136	16,2
	31 – 40 years	308	36,7
	41 – 50 years	255	30,4
	51 – 60 years	50	6,0
	Omitted	91	10,8
Rank	Constable	137	16,3
	Sergeant	55	6,5
	Inspector	356	42,4
	Senior Management	57	6,8
	Other	219	26,1
	Omitted	16	1,9
Years in SAPS	Less than 1 year	35	4,2
	1 – 2 years	116	13,8
	3 – 5 years	138	16,4
	6 – 10 years	39	4,6
	11 – 15 years	204	24,3
	More than 15 years	299	35,6
	Omitted	9	1,1
Workplace	Area Office	34	4,0
	Police Station	507	60,4
	Detective Services	95	11,3
	Specialized Unit	110	13,1
	Border Post	22	2,6
	High Risk Unit	2	0,2
	Branch	17	2,0
	Other	41	4,9
	Omitted	12	1,4
Type of work	Functional/Operational	444	52,9
	Specialised	56	6,7
	Administrative	201	23,9
	Management	17	2,0
	Other	98	11,7
	Omitted	123	2,7
Language	Afrikaans	167	19,9
	Setswana	673	80,1

Statistical analysis

The statistical analysis was carried out with the SPSS Programme (SPSS Inc., 2003). Firstly, descriptive statistics (e.g. means, standard deviations, skewness and kurtosis) were used to explore the data. Exploratory factor analyses and Cronbach's alpha coefficients were computed to assess the validity and reliability of the constructs that were measured in this study.

The construct equivalence of the PWS was also determined. Factor analysis is the most frequently employed technique for studying construct equivalence (Van de Vijver & Leung, 1997). In the current study, both exploratory and confirmatory models could have been used. Given that there is information concerning the composition of the instrument (on the basis of previous studies), confirmatory factor analysis appears to be the most appropriate method. However, the current authors used exploratory factor analysis because the PWS is a recently developed measuring instrument, and no studies regarding its validity in South Africa were found. Exploratory factor analysis was therefore used to examine construct equivalence. A principal component analysis was conducted to determine the number of factors of the PWS in the total sample. Subsequently, a principal axis factor analysis with a varimax rotation was used to determine the solution for sample. Factors obtained in each group were compared (after target rotation). The agreement was evaluated by a factor congruence coefficient, Tucker's phi (Van de Vijver & Leung, 1997). Values above 0,90 were taken to point to essential agreement between samples, while values above 0,95 were taken to point to very good agreement.

Multivariate analysis of variance (MANOVA) was used to determine the significance of differences between the wellness of demographic groups. In MANOVA a new dependent variable that maximises group differences is created from the set of dependent variables. One-way analysis is then performed on the newly created dependent variable. Wilks' lambda was used to test the significance of the effects (Tabachnick & Fidell, 2001). Wilks' lambda is a likelihood ratio statistic that tests the likelihood of data on the assumption of equal population mean vectors for all groups against the likelihood of data on the assumption that the population mean vectors are identical to those of the sample mean vectors for the different groups. When an effect was significant in MANOVA, one-way analysis of variance (ANOVA) was used to investigate which dependent variables had been affected. Tukey tests were done to indicate which groups differed significantly when ANOVAs were done.

RESULTS

Validity of the PWS

It was decided to split the Setswana group to obtain a replication sample. Kline (1994) recommended that factors should be replicated if one is working in a field where the number and nature of factors is unknown. The study sample consisted of participants (n = 335) who were randomly selected from the dataset, while the replication sample (n = 338) consisted of the remaining participants.

A simple principal component analysis was carried out on the 36 items of the PWS in the total sample (n = 673). The Bartlett's test of Sphericity showed that the items were factorable (χ^2 = 4705,31; df = 630; p < 0,01). Furthermore, the Kaiser-Meyer-Olkin measure of sampling adequacy was 0,85, which is acceptable compared to the recommended value of higher than 0,60. The results showed that 10 factors had eigenvalues larger than one. However, the scree plot showed that five factors (which explained 37,17% of the variance) could be extracted.

Principal axis factor analyses specifying a two-, three, four-, five, and six-factor structure were conducted in the study sample (n = 335). The rotated factor matrix for the two-factor structure (which was the most meaningful solution) is reported in Table 3. (Note: The rotated factor matrix of the replication sample is also reported in Table 3.)

Table 3 shows that, out of the 36 items, only 4 were complex and problematic (they showed the lowest loadings). These four items were: Item 3 ("Members of my family come to me for support"); Item 4 ("My physical health has restricted me in the past"); Item 9 ("Sometimes I wonder if my family will really be there for me when I am in need") and Item 26 ("I will always be secure with who I am"). Two factors were extracted on the PWS.

The first factor was labelled *Wellness*. The first factor includes items related to psychological wellness (e.g. "I am always optimistic about my future"; "I always look on the bright side of things"; "In the past, I have expected the best"), emotional

wellness ("In general, I feel confident about my abilities"; In the past, I have felt sure of myself among strangers"), social wellness ("My friends know they can always confide in me and ask me for advice"; "My family has been available to support me in the past"; "My friends will be there for me when I need help"), physical wellness ("My body seems to resist physical illness very well"; "My physical health is excellent"; "Compared to people I know, my past physical health has been excellent"; "I expect to always be physically healthy"), spiritual wellness ("I believe there is a real purpose to my life"; "I feel a sense of mission about my future"; "It seems that my life has always had purpose"), and intellectual wellness ("I will always seek out activities that challenge me to think and reason"; "Generally, I feel pleased with the amount of intellectual stimulation I receive in my daily life"; "The amount of information that I process in a typical day is just about right for me"; "In the past, I have generally found intellectual challenges to be vital to my overall well-being").

The second factor was labelled *Unwellness* and includes items related to psychological unwellness ("I rarely count on good things happening to me"; "In the past, I hardly ever expected things to go my way"; "Things will not work out the way I want them to in the future"), emotional unwellness ("There have been times when I felt inferior to most of the people I knew"; "I sometimes think I am a worthless individual"; "I am uncertain about my ability to do things well in the future"), social unwellness ("In the past, I have not always had friends with whom I could share my joys and sorrows"), physical unwellness ("I expect my physical health to get worse"), spiritual unwellness ("Life does not hold much future promise for me"; Sometimes I don't understand what life is all about"; "I have felt in the past that my life was meaningless"), and intellectual unwellness ("I avoid activities which require me to concentrate"; "My life has often seemed devoid of positive mental stimulation").

According to Kline (1994), similarity of factor loadings provides an indication of the replication of a factor structure. In addition, construct equivalence was used to compare the factor structures of the study sample and the replication sample. Subsequently, a principal axis factor analysis with a varimax rotation was carried out for the two samples (see Table 3). The resulting rotated component matrices were used as input for the target rotations, which were used to assess the construct equivalence of the PWS in the two samples. The Tucker's phi coefficients for the two samples are reported in Table 4.

After target rotation, the following Tucker's phi coefficients were obtained: Factor 1 = 0,98 and Factor 2 = 0,96. These Tucker's phi coefficients compared favourably with the guideline of 0,90. Therefore, the factor structure in the cross-validation sample is sufficiently equivalent, compared with the test sample.

Descriptive statistics

The descriptive statistics and alpha coefficients of the two factors of the PWS are given in Table 5.

Table 5 shows that acceptable Cronbach alpha coefficients were obtained on both dimensions of the PWS, varying from 0,81 to 0,74. Based on the results in Table 5, it can be inferred that the reliabilities of the PWS are acceptable. The correlation between the two dimensions was not statistically significant (r = 0,06).

Differences between groups

Next, MANOVA followed to investigate the relationship between perceived wellness and unwellness and various groups, including gender, qualification, age and rank. The results of these comparisons are reported in Table 6.

Table 6 shows that there was a significant effect of age category on the dependent variable wellness ($F_{(6,1184)} = 4,41$; $p < 0,01$; $\eta^2 = 0,02$). Analysis of each individual dependent variable shows that the groups differed in terms of wellness ($F_{(3, 593)} = 3,93$; $p < 0,01$; $\eta^2 = 0,02$) and unwellness ($F_{(3, 597)} = 5,42$; $p < 0,01$; $\eta 2 = 0,03$). The youngest age group (20-30 years) showed the highest levels of perceived wellness, while Group 3 (41-50 years) measured the lowest on perceived wellness. Group 1 (20-30 years) also scored the highest on unwellness, while Group 4 (older than 51 years) scored the lowest on unwellness.

Table 3
Rotated component matrices for setswana group

	Study sample		Replication sample	
PW1 I am always optimistic about my future	**0,62**	0,14	**0,43**	0,12
PW2 There have been times when I felt inferior to most of the people I knew	-0,01	**0,41**	0,12	0,39
PW3 Members of my family come to me for support	0,24	-0,09	0,27	-0,11
PW4 My physical health has restricted me in the past.	-0,21	0,05	-0,22	0,04
PW5 I believe there is a real purpose to my life.	**0,47**	0,07	**0,59**	0,11
PW6 I will always seek out activities that challenge me to think and reason.	**0,44**	-0,04	**0,51**	0,02
PW7 I rarely count on good things happening to me.	-0,16	**0,36**	-0,08	**0,20**
PW8 In general, I feel confident about my abilities.	0,50	0,08	**0,39**	0,23
PW9 Sometimes I wonder if my family will really be there for me when I am in need.	-0,16	0,28	-0,34	0,11
PW10 My body seems to resist physical illness very well.	**0,56**	0,14	**0,56**	0,01
PW11 Life does not hold much future promise for me.	0,15	**0,57**	0,12	**0,51**
PW12 I avoid activities which require me to concentrate.	-0,15	**0,35**	-0,13	**0,32**
PW13 I always look on the bright side of things.	**0,46**	0,02	**0,48**	0,15
PW14 I sometimes think I am a worthless individual.	0,14	0,55	0,15	**0,61**
PW15 My friends know they can always confide in me and ask me for advice.	**0,58**	0,11	**0,55**	0,04
PW16 My physical health is excellent.	**0,49**	0,12	**0,52**	0,05
PW17 Sometimes I don't understand what life is all about.	0,12	**0,60**	0,18	**0,53**
PW18 Generally, I feel pleased with the amount of intellectual stimulation I receive in my daily life.	**0,47**	0,04	**0,44**	-0,10
PW19 In the past, I have expected the best.	**0,38**	-0,18	**0,27**	-0,05
PW20 I am uncertain about my ability to do things well in the future.	0,07	**0,42**	0,02	**0,36**
PW21 My family has been available to support me in the past.	0,40	-0,07	**0,36**	-0,04
PW22 Compared to people I know, my past physical health has been excellent.	**0,42**	-0,03	**0,42**	0,06
PW23 I feel a sense of mission about my future.	**0,64**	0,10	**0,62**	0,03
PW24 The amount of information that I process in a typical day is just about right for me	**0,49**	0,05	**0,48**	0,11
PW25 In the past, I hardly ever expected things to go my way.	-0,17	**0,44**	-0,22	**0,39**
PW26 I will always be secure with who I am.	0,24	-0,13	0,34	-0,08
PW27 In the past, I have not always had friends with whom I could share my joys and sorrows.	-0,01	**0,40**	-0,03	**0,36**
PW28 I expect to always be physically healthy.	**0,44**	0,01	**0,47**	0,10
PW29 I have felt in the past that my life was meaningless.	0,14	**0,59**	0,16	**0,54**
PW30 In the past, I have generally found intellectual challenges to be vital to my overall well-being.	0,31	-0,16	0,30	0,01
PW31 Things will not work out the way I want them to in the future.	0,05	**0,40**	-0,07	0,46
PW32 In the past, I have felt sure of myself among strangers.	**0,37**	-0,10	**0,30**	-0,13
PW33 My friends will be there for me when I need help.	**0,45**	0,01	**0,39**	0,02
PW34 I expect my physical health to get worse.	0,16	**0,47**	0,09	**0,39**
PW35 It seems that my life has always had purpose.	**0,55**	0,02	0,52	0,13
PW36 My life has often seemed devoid of positive mental stimulation.	-0,11	**0,36**	-0,06	**0,33**

Table 4
Tucker's PHI coefficients for sample 1 and the cross-validation sample

Factor	Tucker's Phi
Perceived Wellness	0,98
Perceived Unwellness	0,96

Table 5
Descriptive statistics and alpha coefficients of the PWS factors

	Mean	SD	Skewness	Kurtosis	α
Wellness	96,14	13,38	-1,49	4,31	0,82
Unwellness	55,30	12,47	-0,65	0,30	0,74

table 6
Manova with gender, qualifications, age, and rank as independent variables

Variable	Value	F	df	Error df	p	η^2
Gender	0,99	1,87	2	668	0,16	-
Qualifications	0,98	2,11	6	1308	0,05	-
Age	0,96	4,41	6	1184	0,00*	0,02
Rank	0,94	4,87	8	1312	0,00*	0,03

* Statistically significant differences: $p < 0,01$

Table 6 shows that there was a significant effect of rank on the combined dependent variable wellness ($F_{(8, 1312)} = 4,78$; $p < 0,01$; $\eta^2 = 0,03$). Analysis of each individual dependent variable showed that the groups differed in terms of wellness ($F_{(4, 657)} = 4,40$; $p < 0,01$; $\eta^2 = 0,03$) and unwellness ($F_{(4, 657)} = 5,84$; $p < 0,01$; $\eta^2 = 0,03$). Constables (compared to the other groups) measured higher on perceived wellness as well as unwellness.

DISCUSSION

The aims of this study were to assess the factorial validity and reliability of a Setswana translation of the PWS in the SAPS, and to investigate differences in the perceived wellness of employees based on gender, qualifications, age and rank. Evidence was found for the factorial invariance of the PWS. Perceived wellness showed a two-factor structure consisting of wellness and unwellness. Furthermore, differences were found between the perceived wellness of different age groups as well as ranks.

Two factors related to well-being were found, namely wellness and unwellness. Wellness consisted of positive aspects of psychological, emotional, social, physical, spiritual and intellectual well-being. Unwellness consisted of the negative aspects of psychological, emotional, social, physical, spiritual and intellectual unwell-being. This finding is in contrast with the results of Adams et al. (1997), who found that perceived wellness consists of six highly related dimensions which loaded on a single factor. The results of this study suggest two separate factors, namely wellness and unwellness, which were weakly related. This finding is contradictory to the findings of Adams et al. (1997) that the components of wellness are related.

The fact that the factor structure of the PWS was replicated in the second sample provides support for the two-factor structure. The factor loadings in the replication sample were comparable to the factor loadings of the study sample (Kline, 1994). Furthermore, the factorial agreement between the two factors was highly acceptable (Tucker's phi > 0,90 for both factors).

The obtained factors might relate to the conceptualisation of Keyes (2002), which implies that mental health forms a bipolar continuum, with two dimensions, namely flourishing and languishing, In *flourishing*, an individual experiences high levels of positive emotion and also functions well both psychologically and socially (comparable to the wellness factor that was found in this study). *Languishing* refers to emptiness, stagnation and a life of despair (comparable to the unwellness factor in this study).

Only four items were lost from the original PWS, due to the fact that factor loadings were low (< 0,33) on either Factor 1 or Factor 2 or because of double loadings (which indicate that the items are complex). Item 3 ("Members of my family come to me for support"), item 4 ("My physical health has restricted me in the past"), item 9 ("Sometimes, I wonder if my family will really be there for me when I am in need"), item 26 ("I will always be secure with who I am") and item 3 ("Members of my family come to me for support") could have been interpreted wrongly by the participants. Alternatively, the problems with these items could also be attributed to meaning loss that took place from the English version to the Setswana version.

It is a concern that the final two-factor structure is made up of one positive factor (wellness) and one negative factor (unwellness). This suggests that the results of the study could be interpreted in another way too. It is possible that the results of the study merely reflect the distinction between *wellness* and *unwellness* instead of the differentiation between wellness and unwellness. According to Kline (1994), the interpretation of factors from item content is not evidence of validity. A factor could load on items that had a particular format (in this study positive and negative item formats). A factor might also load on items that attracted socially desirable responses or acquiescent responses, and such a factor would be a measure only of these response sets. This means that research is needed in order to further validate the PWS, and that our actual results still need to be interpreted with caution.

Statistically significant differences were found between the perceived wellness and unwellness of different age groups. The youngest age group (20-30 years) showed the highest levels of perceived wellness, while group 3 (41-50 years) scored the lowest on perceived wellness. Group 1 (20-30 years) also scored the highest on unwellness, while Group 3 (40-50 years) scored the lowest on unwellness. Other studies (e.g. Schaufeli & Enzmann, 1998; Wissing & Van Eeden, 2002) also found that younger individuals experience lower psychological well-being and higher burnout. Taking the ages of the participants into consideration, their physical state (young individuals), as well as the fact that most of the participants are either constables or sergeants (with little managerial responsibilities), can contribute to their perceived wellness. Younger individuals are more active, and physical exercise increases flourishing. At individual level, physical activity has the capacity to prevent mental illness, to foster positive emotions and to buffer individuals against the stresses of life (Carr, 2003). Group 3 (40-50 years) may experience the highest perceived unwellness due to organisational factors (e.g. transformation).

Regarding rank, constables scored statistically significantly higher than other rank groups regarding perceived wellness as well as unwellness. The rank of constable is the lowest rank in the organisation and constables might experience problems to cope with conditions in the SAPS (Pienaar & Rothmann, 2005), which might explain their higher scores on unwellness. Individuals falling in this category are still very young and have the advantage of being in a physically healthy state, not feeling stagnated in their job and still seeing the work of a police official as challenging, which contributes to a feeling of wellness. A high feeling of unwellness in this same group can also appear due to receiving low salaries, a feeling of being the junior in the organisation and having to react to instructions from all the higher ranks, feeling insecure in the workplace and still having to "earn" a place in the organisation.

In conclusion, this study could serve as a starting point for research regarding the measurement of perceived wellness in South Africa. However, the use of an accidental sample was a limitation and might have contributed to non-response bias. Police members with a low level of perceived wellness might have decided not to participate in the study (because some questionnaires were not returned). Furthermore, only Setswana speakers were included in the study.

RECOMMENDATIONS

Several research issues emanate from this study. These require attention in order to increase both our understanding of wellness and unwellness and the usefulness of these concepts. The concept wellness and well-being is a relatively new construct in South Africa. A first and major issue still relates to the psychometric properties of the PWS. Although two definite constructs were identified, further studies in this regard are still needed to establish more fully the factorial validity. It would be worthwhile to compile a larger database with the PWS for this purpose, because this would enable one to perform more thorough tests of the factorial validity and construct equivalence of the PWS in different groups (e.g. according to gender, age, and race). Larger sample sizes will also increase confidence that the actual study findings are consistent across other (similar and different) categories.

The findings of this study also suggest the need for possible improvement to the item content of the PWS in general, and to the translated versions thereof specifically. This implies that the wording of certain items may need to be modified in order to make them more appropriate to the specific content. It will also have to be established whether the translation is part of the problem. A specific concern relates to the meaning of the two dimensions of the PWS. In this study, the dimensions were interpreted as wellness versus unwellness. Future research can emphasise the meaning of these two factors.

A reliable, equivalent and valid measure of perceived wellness could help to assess the prevalence of wellness in South Africa. Therefore, a representative random sample of the South African working population needs to be surveyed. Longitudinal research and trend studies are recommended to establish this. More research is also needed regarding the dimensions of perceived wellness in different language groups.

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