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

Jolanda Ekkerd, Hons.B.A.

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Study leader: Prof. S Rothmann
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REMARKS

The reader is reminded of the following:

- The publication style prescribed by the *Publication Manual* (5th edition) of the American Psychological Association (APA) was followed in this mini-dissertation. This practice is in line with the policy of the Programme in Industrial Psychology of the North-West University to use the APA style in all scientific documents as from January 1999.

- The mini-dissertation is submitted in the form of a research article. The name of the study leader appears on the article as it was submitted for publication.

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SUMMARY

Subject: The validation of the Perceived Wellness Survey in the South African Police Service.

Key terms: Wellness, validity, reliability, equivalence, police.

The era of globalisation calls for a flexible, multi-skilled, knowledgeable, inter-changeable and adaptable healthy workforce. Employee wellness is essential to ensure an effective and efficient workforce. It is important, however, to measure wellness before it can be developed. Currently there is a need for a measuring instrument in South Africa which can measure all the dimensions of wellness as conceptualised in the literature. However, it is risky to apply psychometric instruments developed in other cultures to the South African context without validating it.

The objective of this study were to validate the Perceived Wellness Survey (PWS) in the South African Police Service (SAPS). The specific objectives of this study included: to conceptualise perceived wellness and the dimensions thereof from the literature; to assess the internal consistency and construct validity of the PWS in a sample of police personnel, and to investigate differences in the perceived wellness of biographical groups.

A cross-sectional survey design with an accidental sample (N = 840) of police personnel was used. The sample was composed of personnel from multiple divisions in the SAPS, including Functional as well as Public Service Act personnel. The Perceived Wellness Survey (PWS) and a biographical questionnaire were administered. Descriptive statistics, principal component analysis, target rotations, alpha coefficients and multivariate analysis of variance were used to analyse the data.

Exploratory factor analysis with target rotations failed to confirm the construct equivalence of the PWS for Afrikaans and Setswana language groups. Two reliable factors, namely wellness and illness were extracted in a random sample (n = 335) of the Setswana group 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

Recommendations for future research were made.

OPSOMMING

Onderwerp: Die validering van die Waargenome Welstandvraelys in die Suid-Afrikaanse Polisiediens.

Sleutelterme: Welstand, geldigheid, betroubaarheid, ekwivalensie, polisie.

Die era van globalisering vereis nie net 'n multi-vaardige, vinnig-veranderende, maklike aanpasbare werkmag nie, maar ook 'n gesonde werkmag om al die stressore te hanteer. Werknemerwelstand is noodsaaklik ten einde 'n doelmatige en doeltreffende arbeidsmag te verseker. Dit is belangrik om welstand te meet alvorens dit ontwikkel kan word. Tans is daar 'n behoefte aan sodanige meetinstrument wat gebruik kan word om die dimensies van welstand wat in die literatuur gekonseptualiseer word, te meet. Dit is riskant om meetinstrumente wat vir ander kultuurgroepe ontwikkel is, in die Suid-Afrikaanse konteks te gebruik sonder dat dit gevalideer is.

Die doelstelling van hierdie studie was om die Waargenome Welstandvraelys (WWV) in die Suid-Afrikaanse Polisiediens (SAPD) te valideer. Spesifieke doelstellings het ingesluit: om waargenome welstand sowel as die dimensies daarvan te konseptualiseer, om die betroubaarheid en geldigheid van die WWV te bepaal, en om verskille tussen verskillende biografiese groepe se waargenome welstand te bepaal.

'n Dwarsdeursnee-opnameontwerp met 'n beskikbaarheidsteekproef ($N = 840$) is gebruik. Die steekproef het bestaan uit werknemers vanuit die verskillende afdelings in die SAPD, insluitend funksionele lede en Staatsdienswet-personeel. Die Waargenome Welstandvraelys (WWV) en 'n biografiese vraelys is afgeneem. Beskrywende statistiek, hoofkomponente-analise, teikenrotasies, alfakoëffisiënte en meerveranderlike variansie-analise is gebruik om die data te ontleed

Verkennende faktoranalise met teikenrotasies kon nie die konstrukekwivalensie van die WWV vir Afrikaans- en Setswana-sprekende deelnemers bevestig nie. Twee betroubare faktore, naamlik welstand en siekte, is onttrek in 'n ewekansige steekproef ($n = 335$) van die Setswana groep en in 'n reproduksie steekproef. 'n Alternatiewe interpretasie was egter ook

moontlik. Statisties betekenisvolle verskille is gevind ten opsigte van die waargenome welstand met betrekking tot ouderdom en rang

Aanbevelings vir toekomstige navorsing is aan die hand gedoen.

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CHAPTER 1

INTRODUCTION

This mini-dissertation deals with the validation of the Perceived Wellness Survey (PWS) as well as the prevalence of wellness in the South African Police Service (SAPS).

Chapter 1 focuses on the problem statement, objectives, research method and division of chapters.

1.1 PROBLEM STATEMENT

The fast-moving environment in which organisations have to operate has become increasingly complex and uncertain, and they need to adapt to an ever increasing rate of change. Not only do organisations need to adapt to these changes, but also to compete in a global market. The era of globalisation calls for a flexible, multi-skilled, knowledgeable, inter-changeable and adaptable workforce. Empirical research (Jandeska & Zapack, 2003) shows that employee wellness contributes to various dimensions of performance effectiveness.

Employee wellness should not just be focused on "what can go wrong" (Strümpfer, 1990). In contrast to the pathological interest in "what can go wrong", attempts have been made to discover "what can go right". This is in line with the positive psychology paradigm which is about valued subjective experiences; well-being, contentment, and satisfaction (in the past), hope and optimism (for the future) and flow and happiness (in the present) (Seligman & Csikszentmihalyi, 2000, p. 3). Positive functioning consists of the multidimensional constructs of psychological well-being and social well-being (Keyes, 1998; Ryff & Singer, 2000). The focus of psychological well-being remains at the individual level whereas relations with others and the environment are the primary aims of social well-being (Keys & Magyar-Moe, 2003). Strümpfer (1990) argued that the concept of *salutogenesis* (a study of the origins of health) should be broadened to *fortigenesis* (a study of the origins of strengths). Fortigenesis focuses on what can go right and the enhancement of well-being. In this study the focus is on the presence of wellness rather than simply the absence of illness.

Individuals with numerous risk factors for disease tend to be higher cost employees in terms of health care, which has direct import for employers. Employees who adopt a healthy lifestyle are likely to be healthier, raise healthy families and have lower medical costs while also being more productive workers. Wellness programmes are investments in human capital, and investment in human capital is the most valuable asset any employer can have (Jandeska & Zapack, 2003).

When wellness is emphasised in the workplace, illness-related absenteeism can be reduced, workforce productivity and a company's image can be improved and medical costs can be lowered. Furthermore, increased creativity and improved quality can take place and employees can have more energy and can be more focused. Healthy workers are more likely to want to come to work and workplace morale benefits (Jandeska & Zapack, 2003).

Lindley and Joseph (2004) found that well-being goes beyond the absence of ill-health to include 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 & Magyor-Moe, 2003).

Job-related well-being implies both psychological and physical health at work. Happiness, defined within the scientific term of subjective well-being, is the sum of life satisfaction and affective balance (i.e. positive affect minus negative affect). Psychological well-being refers to engagement with the existential challenges of life (Lindley & Joseph, 2004). Three aspects of affective well-being on two orthogonal dimensions can be distinguished, namely 1) axis of pleasure or displeasure, 2) axis ranging from anxiety to comfort, and 3) axis from depression to enthusiasm (Lindley & Joseph, 2004).

Wellness can be defined as "a composite of physical, emotional, spiritual, intellectual, occupational, and social health; health promotion is the means to achieve wellness" (Reardon, 1998, p. 117). Wellness goes beyond the entrenched idea of health as an absence of illness. It implies a proactive stance towards achieving optimal physical, mental and emotional well-being. These definitions can be explained and interpreted by referring to human life as a "comprehensive system" considered as being a "whole" from a systems theory perspective.

According to Lindley and Joseph (2004), well-being includes aspiring to learn, being reasonably independent and possessing confidence. Physical well-being at work goes beyond evading workplace injury and disease to include personal initiatives which aim at improving physical health. Schaufeli and Bakker (2001) classify four types of well-being at work which lie on two dimensions: the horizontal axis represents pleasure versus unpleasurable, while the vertical dimension relates to the mobilisation of energy.

Organisational wellness refers to the absence of labour turnover, no violations of psychological contracts, low job insecurity, minimum downsizing, and the presence of high employee morale, increased productivity, increased creativity and quality, high job satisfaction, and organisational commitment. On the other hand, individual wellness refers to the existence of resilience, engagement, psychological strengths, and high energy levels (Rothmann, 2003).

The environment in which employees in South Africa and elsewhere in the world currently function demands more of them than did any previous period. Employees have to cope with many demands - often with limited resources and a lack of control. Tracking and addressing their effectiveness in coping with new demands and stimulating their growth in areas that could possibly impact on individual well-being and organisational efficiency and effectiveness therefore are crucial (Rothmann, 2003).

Three streams of organisational health can be distinguished, namely concept, practice and health promotion. The first stream focuses on a healthy workplace and the idea that some workplaces generally are healthier than others (a holistic view of organisations). The second stream focuses on practice-orientated and consultative models that promote organisational health. The third stream focuses on comprehensive or multifactor health promotion and disease management programmes (Quick & Tetrick, 2003). Different levels of health can be distinguished: individual, job, or organisational levels. These three levels are integrative and form an integrative model, for example: organisational change strategies can have unintended and negative effects on health and stress. On the other hand, employee-level participation in health promotion is limited and positive outcomes short-lived when either upper management or the workplace environment is unsupportive.

It is important that wellness in both the individual and the organisation be identified, diagnosed and measured to ensure that effective work-wellness programmes are developed, implemented and evaluated. Adams, Bezner, and Steinhardt (1997) identified six dimensions of wellness namely 1) emotional centeredness; 2) intellectual stimulation; 3) physical resilience; 4) psychological optimism; 5) social connectedness and 6) spiritual life purpose. Ryff (Keyes & Magyar-Moe, 2003) distinguished between the following six dimensions of psychological well-being: 1) self-acceptance; 2) personal growth; 3) purpose in life; 4) environmental mastery; 5) autonomy and 6) positive relations with others.

Because most wellness measures address clinical, physiological, or behavioural manifestations of disease or risk factors, the Perceived Wellness Survey (PWS) is unique (Adams, Bezner, Drabbs, Zambarano, and Steinhardt, 2000). The model on which the PWS rests, is based on three principles. First, the model is multidimensional, balanced among dimensions and salutogenic (defined causing health rather than illness). Second, the model is dynamically bi-directional, which incorporates balance among the dimensions. The top of the model represents wellness because it is expanded to the fullest possible extent, whereas the tightly constricted bottom represents illness. Illness is a perception of disconnection, poor self-esteem, poor physical health, pessimism, existential frustration, lack of intellectual stimulation, or any combination of above. Third, the model and measure include the following dimensions 1) emotional centeredness (a secure self-identity and a positive sense of self-regard); 2) intellectual stimulation (perception of being internally energised by an optimal amount of intellectually stimulating activity); 3) physical resilience (a positive perception and expectation of physical health); 4) psychological optimism (perception that one will experience positive outcomes to the events and circumstance of life); 5) social connectedness (perception of having support available from family or friends and perception of being a valued support provider); and 6) spiritual life purpose (a positive sense of meaning and purpose in life) (Adams et al., 2000).

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 quiets the size of those fluctuations. In their study, Bezner, Adams, Garner, and Woodruffs (1999) found that individuals who score high on perceived wellness should: 1) be physically

more healthy, 2) have a greater sense of meaning and purpose in life, 3) expect that positive things will occur in their life, no matter what the circumstances, 4) be more connected with family or friends, 5) be more secure and happy with who they are, and 6) be intellectually vibrant. Research findings by Bezner et al. (1999) support the perceived wellness construct and add breadth to the measure.

Compared to other occupations, police work has been identified as a particularly stressful occupation (Goodman, 1990; Gulle, Tredoux, & Foster, 1998; Kroes, 1976; Reiser, 1974) - probably one of the most stressful occupations world-wide. Studies investigating the extent of Post Traumatic Stress Disorder (PTSD) in the SAPS indicated that 36% of the riot police and 41% Black police suffered from PTSD. More evidence for the increasing distress of the SAPS can be found in the alarming rise in suicide statistics: an incidence of 60 out of every 100 000, compared to an incidence of 5 out of every 100 000 for the general public in 1991 (Nel & Burgers, 1998). There has also been a dramatic increase in medical boarding – particularly for psychological reasons – as well as in divorce statistics, and alcohol and drug abuse (Gulle et al., 1998). Gulle et al. (1998) found that the SAPS experience a higher degree of stress than a police sample from the United States of America.

It is important that wellness is diagnosed in the individual as well as in the workplace. To ensure accurate diagnoses it is important to use a valid and reliable test instrument. The PWS indicated a fair and accepted conceptualisation of the construct as well as acceptable psychometric characteristics. However, the PWS has never been used in South Africa. Therefore the aim of this study is to validate the PWS. Through this research a better understanding of perceived wellness and organisational health will be gained, especially within the SAPS. The organisation will benefit from this study through the availability of a valid, reliable and equivalent measure that can be used to diagnose employee wellness, and by using this data to evaluate present wellness programmes.

1.2 AIMS OF THE RESEARCH

The research objectives can be divided into a general aim and specific objectives

1.2.1 General aim

The general aim of the current study is to validate the Perceived Wellness Survey (PWS) in the SAPS

1.2.2 Specific objectives

The specific objectives of this study include:

- To conceptualise perceived wellness and the dimensions thereof from the literature.
- To assess the reliability, construct equivalence and validity of the PWS in a sample of police members.
- To investigate differences in the perceived wellness of police personnel based on age, gender, qualifications, and rank.

1.3 RESEARCH METHOD

The research method consists of the following aspects:

1.3.1 Research design

A cross-sectional survey design is used to reach the objectives of this study, whereby a sample is drawn from a population at one time (Shaughnessy & Zechmeister, 1997). Information collected is used to describe the population at that time. This design can also be used to assess interrelationships among variables within a population. According to Shaughnessy and Zechmeister (1997), this design is ideally suited when the aim of the study is descriptive and predictive by nature. According to Shaughnessy and Zechmeister (1997), cross-sectional designs are appropriate where groups of subjects at various stages of development are studied simultaneously, whereas the survey technique of data collection gathers information from the target population by means of questionnaires.

1.3.2 Participants

An accidental sample ($N = 840$) was taken from the different employees (including functional members and Public Service Act personnel) in the different divisions of the SAPS in the Manco Area. Participants were assured that their identity will remain anonymous.

1.3.3 Measuring instrument

The Perceived Wellness Survey (PWS) (Bezner, et al., 1999) is used to measure perceived wellness. The PWS is a 36-item instrument designed to assess an individual's wellness perceptions in six dimensions (physical, social, emotional, intellectual, psychological, and spiritual) There are six questions in each dimension. Sample items from each dimension are respectively: "I expect to always be physically healthy," "I believe there is a real purpose for 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." Responses to the questions are given on a 6-point Likert scale ranging from 1 (*very strongly disagree*) to 6 (*very strongly agree*) (Adams, Bezner, Garner, & Woodruffs, 1998). The PWS composite score is the sum of the subscale means divided by a denominator that includes the standard deviation among subscales. Research by Adams and Steinhardt (1997) has shown that the PWS possesses adequate reliability (alpha = 0,88 – 0,93) and several types of validity.

1.3.4 Statistical analysis

The statistical analysis is carried out with the SPSS Programme (SPSS Inc., 2003). First, descriptive statistics (e.g., means, standard deviations, skewness and kurtosis) are used to explore the data. Exploratory factor analyses and Cronbach's alpha coefficient are used to assess the validity and reliability of the construct measured in this study.

Construct equivalence of the PWS is also performed. Construct equivalence can be investigated with several techniques, such as factor analysis, cluster analysis, and multidimensional scaling or other dimensionality-reducing techniques (Van de Vijver & Leung, 1997). The basic idea behind the application of these techniques is to obtain a structure in each language group which can then be compared across all language groups

involved. Factor analysis is the most frequently employed technique for studying construct equivalence. 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), the choice in favour of confirmatory factor analysis may seem obvious. However, the current authors used exploratory factor analysis for a pragmatic reason. The PWS is a recently developed measuring instrument, and no studies regarding its validity in South Africa were found. Also, the authors had negative experiences with the use of confirmatory models in studying the construct equivalence of the PWS. The main problem in the application of confirmatory models is their fit to the data, which is almost always very poor. Usually it is not clear whether the reasons for the poor fit are serious and should lead to a reformulation of the model, or trivial and do not challenge the underlying model.

Exploratory factor analysis is therefore used to examine the construct equivalence. A principal component analysis is conducted to determine the number of factors of the PWS in the total sample. Subsequently, a direct oblimin rotation is used to determine the solution for each race group. Factors obtained in each group is compared (after target rotation). The agreement is evaluated by a factor congruence coefficient, Tucker's phi (Van de Vijver & Leung, 1997). Values above 0,90 are taken to point to essential agreement between cultural groups, while values above 0,95 point to very good agreement. A high agreement implies that the factor loadings of the lower and higher level are equal up to a multiplying constant.

Multivariate analysis of variance (MANOVA) is used to determine the significance of differences between the wellness of demographic groups. MANOVA tests whether mean differences among groups on a combination of dependent variables are likely to have occurred by chance (Tabachnick & Fidell, 2001). 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 is used to test the significance of the effects. Wilks' lambda is a likelihood ratio statistic that tests the likelihood of data under the assumption of equal population mean vectors for all groups against the likelihood under the assumption that the population mean vectors are identical to those of the sample mean vectors for the different groups. If an effect is significant in MANOVA, one-way analysis of variance (ANOVA) is used to investigate which dependent variables have been affected. Because multiple ANOVAs are used, Bonferroni type

adjustments are made for inflated Type 1 error. Tukey tests are done to indicate which groups differed significantly when ANOVAs were done.

1.3.5 Research procedure

The measuring battery is compiled. A letter requesting participation and motivating the research is included. Ethical aspects regarding the research will be discussed with the participants. The test battery will be administered in small groups at the different work places on suitable dates (classroom setting). The results will be analysed and feedback will be given to all individuals who requested feedback.

1.4 CHAPTER DIVISION

The chapters are presented as follows in this mini-dissertation.

Chapter 1: Introduction, problem statement and objectives
Chapter 2: Research article
Chapter 3: Conclusions, limitations and recommendations.

1.5 CHAPTER SUMMARY

In this chapter, the problem statement and the motivation were discussed. The specific objectives of the research were formulated and the method of research was indicated. It was also indicated how the statistical analysis was performed.

A research article on perceived wellness is presented in Chapter 2.

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CHAPTER 2

RESEARCH ARTICLE

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

J. EKKERD

S. ROTHMANN

WorkWell: The Research Unit for People, Policy and Performance, North-West University, Potchefstroom

ABSTRACT

The objectives of this study were to validate 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 = 840) of police personnel was used. The Perceived Wellness Survey (PWS) and a biographical questionnaire were administered. Exploratory factor analysis with target rotations failed to confirm the construct equivalence of the PWS for Afrikaans and Setswana language groups. Two reliable factors, namely wellness and illness were extracted in a random sample (n = 335) of the Setswana group and in a replication sample (n = 338). However, an alternative interpretation was also possible. Statistically significantly differences were found between perceived wellness of employees in terms of age and rank.

OPSOMMING

Die doelstelling van hierdie studie was om die Waargenome Welstandvraelys (WWV) in die Suid-Afrikaanse Polisiediens te valideer en om verskille in ouderdom, kwalifikasies, geslag en rang ooreenkomstig die waarneming van waargenome welstand te bepaal. 'n Dwarssnee opnameontwerp met 'n beskikbaarheidsteekproef (N = 840) is gebruik. Die Waargenome Welstandvraelys (WWV) en 'n biografiese vraelys is afgeneem. Verkennende faktoranalise met teikenrotasies kon nie die konstrukekwivalensie van die WWV vir Afrikaans- en Setswana-sprekende deelnemers bevestig nie. Twee betroubare faktore, naamlik *welstand* en *siekte* is onttrek in 'n ewekansige steekproef (n = 335) van die Setswana-sprekendes en in 'n reproduksie steekproef. 'n Alternatiewe interpretasie was egter ook moontlik. Statisties betekenisvolle verskille is gevind ten opsigte van die waargenome welstand met betrekking tot ouderdom en rang.

The fast-moving environment in which organisations need to operate has become increasingly complex and uncertain. organisations have to adapt to an ever increasing rate of change (Rothmann & Cilliers, 2004). Not only organisations need to adapt to these changes. but also to compete in a global market. The era of globalisation calls for a flexible. multi-skilled, knowledgeable, inter-changeable and adaptable workforce. Empirical research (Jandeska & Zapack, 2003) showed that an employee wellness contributes to various dimensions of performance effectiveness.

In examining the prevailing views of what constitutes health, it appears that the definition of health remains the absence of disease, not including 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. Strümpfer (1990) states that the health and social sciences have been characterised by a pathogenic paradigm, i.e. an orientation towards the abnormal, with the fundamental question being: "Why do people *fall ill?*" (Knowledge gained by answering this question is then used to find ways of treating and preventing diseases.) Adams, Bezner, and Steinhardt (1997) pointed out that unexplainable 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 to the pathological interest in "what can go wrong", attempts have been made to discover "what can go right". This is in line with the positive psychology paradigm which is about valued subjective experiences; well-being, contentment, and satisfaction (in the past). hope and optimism (for the future) and flow and happiness (in the present) (Seligman & Csikszentmihalyi (2000, p. 3). 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 to not just endure and survive, but flourish. Assuming a wellness perspective in the workplace can have a salutary effect on organisational life. This fact has direct import 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 workers (Jandeska & Zapack, 2003).

Lindley and Joseph (2004) found that well-being goes beyond the absence of ill-health to include 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 & Magyor-Moe, 2003).

The environment in which employees in South Africa and elsewhere in the world currently function demands more of them than did any previous period. Employees have to cope with many demands - often with limited resources and a lack of control. Therefore, it is necessary to study the perceived wellness of employees (Rothmann, 2003). Compared to other occupations, police work has been identified as particularly stressful (Goodman, 1990; Gulle, Tredoux, & Foster, 1998; Kroes, 1976; Reiser 1974) - probably one of the most stressful occupations world-wide. Studies investigating the extent of Post Traumatic Stress Disorder (PTSD) in the South African Police Service (SAPS) indicated that 36% of the Public Order policing and 41% black police members suffered from PTSD. More evidence for the increasing distress of police members can be found in the alarming rise in suicide statistics, an incidence of 60 out of every 100 000 compared to an incidence of 5 out of every 100 000 for the general public in 1991 (Nel & Burgers, 1998). Gulle et al. (1998) found that police members in South Africa experience more stress than police officers in the United States of America.

It is important to diagnose wellness of individuals in South Africa. 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. Furthermore, before the wellness in language (cultural) groups can be compared, it is necessary to assess the construct equivalence (factorial invariance) of the measuring instrument in these contexts. If cultural influences are not accounted for, invalid conclusions regarding the constructs under study could be made with serious implications for diverse settings (Van de Vijver & Leung, 1997). Construct equivalence indicates the extent to which the same construct is measured across the (cultural) groups under study, in other words, the comparison of cultural groups, seeing that their scores are related to the same construct. In the case of construct in-equivalence, no comparison can be made due to the fact that scores obtained are not related to the same construct (Van de Vijver & Leung, 1997).

To ensure accurate diagnoses. it is necessary to use a equivalent, 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 regarding the psychometric properties of the PWS in South Africa were found. This study aims to assess the construct equivalence, validity and reliability of the PWS in a sample of police members and to investigate differences in the perceived wellness of police personnel based on age, gender, qualifications and rank. Through this study a better understanding of perceived wellness will be gained.

Wellness

Ryff and Singer (1998) traced philosophical, rather than medical writings 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); and completely unhealthy status (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 positive than negatively perceived self-attributes such as personal growth (Keyes, 2002).

Meyers, Sweeney, and Witmer (2000) define wellness as a way of life orientated 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. MacKintosh (1958) perceives health as a complex concept made up of various dimensions such as health for survival, health of the emotions, health of the mind, health of the environment, health of the body and spirit. The author summarises health as a multidimensional, holistic concept, perceived by individuals in different ways, not just as an absence of illness and as a human value.

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) operationalized this continuum by means of questions on positive affect, psychological well-being as described by Ryff (1989) and social well-being (Keyes, 1998) as reported in Table 1

Table 1

Elements and Components of Psychological, Social, Emotional and Subjective Well-being

Psychological Well-being	Social Well-being	Emotional Well-being
Self-acceptance: They possess a positive attitude towards the self; acknowledge and accept multiple aspects of self; feel positive about past life.	**Social acceptance:** Have positive attitudes towards people; acknowledge others and generally accept people, despite others' sometimes complex and perplex behaviour.	**Positive affect:** Experience symptoms that suggest enthusiasm, joy, and happiness for life.
Personal growth: Have feelings of continued development and potential; are open to new experiences; feel increasingly knowledgeable and effective.	**Social actualisation:** Care about and believe society is evolving positively; think society has potential to grow positively; think self-society is realising potential.	**Negative affect:** Absence of symptoms that suggest that life is undesirable and un-pleasant.
Purpose in life: Have goals and a sense of direction in life; past life is meaningful; hold beliefs that give purpose to life.	**Social contribution:** Feel they have something valuable to give and present to society; think their daily activities are valued by their community.	**Life satisfaction:** In a sense of contentment, peace, and satisfaction from small discrepancies between wants and needs with accomplishments and attainments.
Environmental mastery: Feel competent and able to manage a complex environment; choose or create personally-suitable community.	**Social coherence:** See a social world that is intelligible, logical, and predictable; care about and are interested in society and contexts.	**Happiness:** Having a general feeling and experience of pleasure, contentment, and joy.
Autonomy: Are self-determining, independent, and regulate internally; resist social pressures to think and act in certain ways; evaluate self by personal standards.	**Social integration:** Feel part of community; think they belong, feel supported, and share commonalities with community.	
Positive relations with others: Have warm, satisfying, trusting relationships; are concerned about others' welfare; capable of strong empathy, affection, and intimacy; understand give-and-take of human relationships.		

Perceived wellness

In this study, the focus is on perceived wellness. Perceived wellness is a multidimensional, salutogenic construct which should be conceptualised, measured and interpreted consistent with an integrated systems view. 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 quiets the size of those fluctuations. In their study, Adams, Bezner. Garner. and Woodruffs (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 a particular person as 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 services. 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. First, subjective perceptions are valid indicators of future objective health. Second, perception forms the basis of cognitive restructuring and lies at the core of several health theories and models. Third various research findings support the importance of wellness perceptions (Adams et al., 1997; Adams. Bezner. Drabbs, Zambarano, and 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 these dimensions (see Figure 1). To best describe and predict individual wellness, models should include several dimensions which are operationalized 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 conceptual anchor of a salutogenic orientation (Adams et al., 1997).

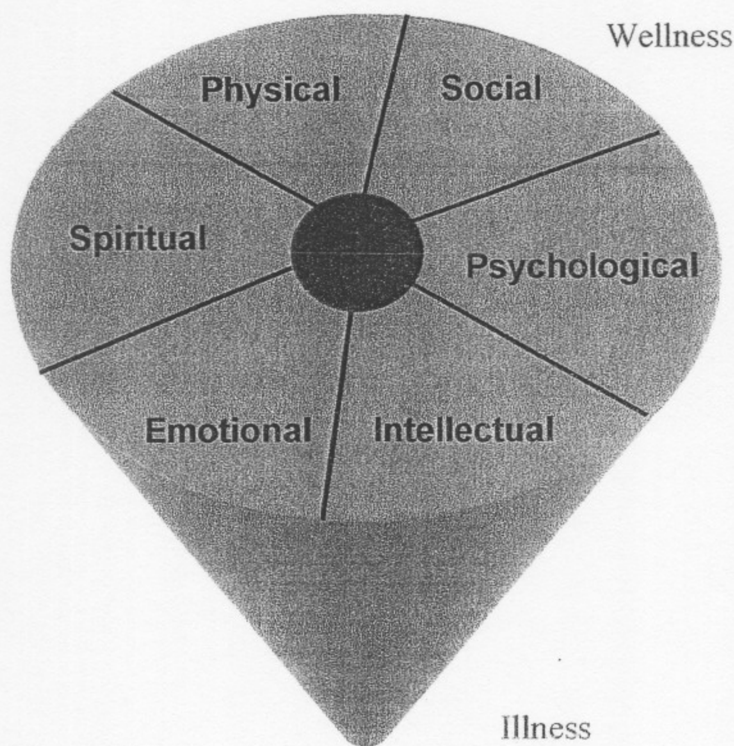

Figure 1. The Perceived Wellness Model

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 2 (Adams et al., 1997).

Table 2

Definitions of Components in the PWS

Component	Definition and Findings
Physical wellness	A positive perception and expectation of physical health. It integrates available health information by accounting for differences in health preferences, values, needs and attitudes. Individuals with poor perceived physical health have a risk of mortality three times greater than subjects with good perceived physical health. Good perceived health is positively associated with higher levels of physical activity and negatively associated with musculoskeletal symptoms and diseases and psychological symptoms.
Spiritual wellness	A belief in a unifying force between the mind and body or a positive perception of meaning and purpose in life. Meaning and purpose in life have been associated with positive health outcomes and well-being.
Psychological wellness	A general perception that one will experience positive outcomes to the events and circumstances of life. It refers to optimism which have been positively related to well-being and happiness, and negatively associated with anxiety and distress.
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. Social support is related to physical and psychological well-being. Men with high levels of support have fewer symptoms of cardiovascular disease and lower mortality rates after other risk factors were held constant. The perception of available support is the most important health protecting factor, and quality of support if more important than quantity. Social support is the healthiest when there is reciprocity
Emotional wellness	Possession of a secure self-identity and a positive sense of self-regard. Self-esteem is an important component of emotional wellness and is a strong predictor of general well-being. Self-identity refers to one's internal image of self, whilst self-regard is the value placed on self-identity (i.e. the extent that one values and likes oneself.
Intellectual wellness	The perception of being internally energised by an optimal amount of intellectually stimulating activity. Intellectual overload and under load can adversely affect health. Moderate amounts of intellectually enriching activity are optimal.

Adams et al (1997, 1998, 2000) used the PWS as a measure of perceived health. The PWS is a salutogenically-orientated, 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 for 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 or the standard deviation among dimensions into a wellness composite 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 were 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 for each of the six dimensions were included, 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 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. Adams et al. (1997) confirmed the discriminate validity of the PWS.

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

occupational stress 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 indexes 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 burnout (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 to 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 high 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, construct equivalence and factorial validity 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.

METHOD

Research design

A cross-sectional survey design was used to reach the objectives of this research. According to Shaughnessy and Zechmeister (1997), cross-sectional designs are appropriate where groups of subjects at various stages of development are studied simultaneously, whereas the survey technique of data collection gathers information from the target population by means of questionnaires.

Participants

The study population can be defined as an accidental sample (N = 840). The sample was composed of personnel from multiple divisions in the SAPS in the Marico Area, North West Province, including functional members as well as public service act personnel. Descriptive information of the sample is given in Table 3.

Table 3

Characteristics of the Participants (N = 840)

Item	Category	Frequency	Percentage
Gender	Male	535	63.7
	Female	303	36.1
	Missing	2	0.2
Race	Black	827	98,5
	White	7	0,8
	Coloured	1	0.1
	Missing	5	0.6
Qualifications	Less than grade 12	149	17,7
	Grade 12	492	58.6
	1-2 year Diploma	62	7.4
	3-year degree	117	13.9
	Missing	20	2,4
Marital Status	Single/Widow/Widower	328	39.0
	Married/Remarried	443	52.7
	Divorced/Separated	64	7.6
	Missing	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
	Missing	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
	Missing	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
	Missing	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
	Missing	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
	Missing	123	2 7
Language	Afrikaans	167	19.9
	Setswana	673	80.1

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-orientated, 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 physical healthy", "I believe there is a real purpose for 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 which 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 to Afrikaans and Setswana for the purposes of this study. First, it was translated from English to Afrikaans and Setswana language experts. Second, the Afrikaans and Setswana versions of the PWS were translated back to English. Third, the translations and back-translations were compared and inconsistencies resolved.

Statistical analysis

The statistical analysis was carried out with the SPSS Programme (SPSS Inc., 2003). First, 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 which were measured in this study.

Construct equivalence of the PWS was also performed. Construct equivalence can be investigated with several techniques, such as factor analysis, cluster analysis, and multidimensional scaling or other dimensionality-reducing techniques (Van de Vijver & Leung, 1997). The basic idea behind the application of these techniques is to obtain a structure in each language group which can then be compared across all language groups involved. Factor analysis is the most frequently employed technique for studying construct equivalence. 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), the choice in favour of confirmatory factor analysis may seem obvious. However, the current authors used exploratory factor analysis for a pragmatic reason. The PWS is a recently developed measuring instrument, and no studies regarding its validity in South Africa were found. Also, the authors had negative experiences with the use of confirmatory models in studying the construct equivalence of the PWS. The main problem in the application of confirmatory models is their fit to the data, which is almost always very poor. Usually it is not clear whether the reasons for the poor fit are serious and should lead to a reformulation of the model, or trivial and do not challenge the underlying model.

Exploratory factor analysis was therefore used to examine construct equivalence. A principal components analysis was conducted to determine the number of factors of the PWS in the total sample. Subsequently, a direct oblimin rotation was used to determine the solution for each race group. 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 are taken to point to essential agreement between cultural groups, while values above 0,95 point to very good agreement. A high agreement implies that the factor loadings of the lower and higher level are equal up to a multiplying constant.

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 under the assumption of equal population mean vectors for all groups against the likelihood under 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

Construct Equivalence of the PWS

The item scores on the PWS was standardised (per language group) prior to conducting factor analyses. A simple principle components analysis was carried out on the 36 items of the PWS in the total sample of Afrikaans (n = 167) and Setswana speaking adults (n = 637). The Bartlett's test of Sphericity showed that the items were factorable (χ^2 = 5723,02; df = 630; p < 0,01). Furthermore, the Kaiser-Meyer-Olkin measure of sampling adequacy was 0,86, which is acceptable compared to the recommended value higher than 0,60. The results showed that 10 factors had eigenvalues larger than one. The scree plot (see Figure 2), however, showed that four factors (which explained 29,63% of the variance) could be extracted.

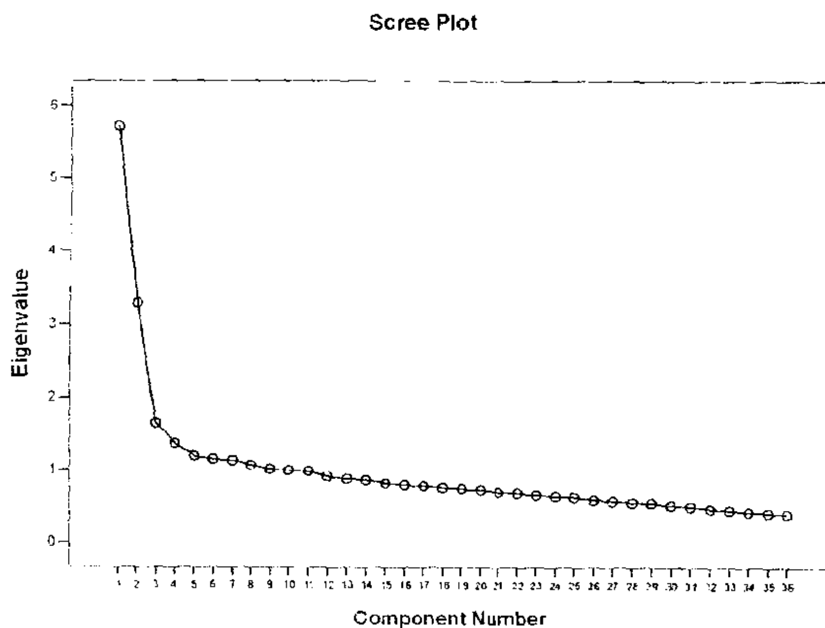

Figure 2. Scree plot of factors extracted

The component matrices of the PWS for Afrikaans and Setswana language groups are reported in Table 4. According to Kline (1994), the first principal component is always a general factor. Thus, to interpret this as a general factor is not admissible. Similarly, the argument that there is one large factor in the matrix, based on the unrotated matrix is not viable. However, it was decided to compare the component matrices for the two language groups to explore the component loadings and because Adams et al. (1997) found that all the dimensions of wellness loaded on a single factor.

Table 4 shows that the component loadings for the two language groups differed substantially. After target rotation, a factor congruence coefficient (Tucker's phi) was 0,81, which suggests that the factor structure was not invariant. Furthermore, no negative factor loadings were found. Negative factor loadings were expected because 15 items of the PWS should be reverse-scored.

Table 4

Component Matrices for Afrikaans and Setswana Groups

	Afrikaans	Setswana
PW1 I am always optimistic about my future	0,39	0,58
PW2 There have been times when I felt inferior to most of the people I knew	0,32	0,16
PW3 Members of my family come to me for support	0,41	0,25
PW4 My physical health has restricted me in the past.	0,34	-0,23
PW5 I believe there is a real purpose for my life.	0,56	0,57
PW6 I will always seek out activities that challenge me to think and reason.	0,53	0,50
PW7 I rarely count on good things happening to me.	0,42	-0,06
PW8 In general, I feel confident about my abilities.	0,62	0,51
PW9 Sometimes I wonder if my family will really be there for me when I am in need.	0,34	-0,22
PW10 My body seems to resist physical illness very well	0,54	0,60
PW11 Life does not hold much future promise for me.	0,52	0,26
PW12 I avoid activities which require me to concentrate.	0,41	-0,08
PW13 I always look on the bright side of things	0,32	0,52
PW14 I sometimes think I am a worthless individual.	0,67	0,28
PW15 My friends know they can always confide in me and ask me for advice.	0,48	0,60
PW16 My physical health is excellent.	0,53	0,55
PW17 Sometimes I don't understand what life is all about.	0,38	0,28
PW18 Generally, I feel pleased with the amount of intellectual stimulation I receive in my daily life.	0,58	0,47
PW19 In the past, I have expected the best.	0,15	0,53
PW20 I am uncertain about my ability to do things well in the future.	0,54	0,15
PW21 My family has been available to support me in the past.	0,38	0,39
PW22 Compared to people I know, my past physicals health has been excellent.	0,33	0,45
PW23 I feel a sense of mission about my future.	0,69	0,65
PW24 The amount of information that I process in a typical day is just about right for me	0,30	0,53
PW25 In the past, I hardly ever expected things to go my way.	0,44	-0,10
PW26 I will always be secure with who I am.	0,67	0,29
PW27 In the past, I have not always had friends with whom I could share my joys and sorrows.	0,37	0,07
PW28 I expect to always be physically healthy.	0,42	0,49
PW29 I have felt in the past that my life was meaningless.	0,55	0,25
PW30 In the past, I have generally found intellectual challenges to be vital to my overall well-being.	0,42	0,33
PW31 Things will not work out the way I want them to in the future.	0,46	0,10
PW32 In the past, I have felt sure of myself among strangers.	0,43	0,30
PW33 My friends will be there for me when I need help.	0,59	0,46
PW34 I expect my physical health to get worse.	0,17	0,24
PW35 It seems that my life has always had purpose.	0,66	0,57
PW36 My life has often seemed devoid of positive mental stimulation.	0,52	-0,00

In the next step, two-, three-, four-, five- and six-factor factor solutions were explored using principal component analysis (because the correlations between the obtained factors were rather low). Target rotations were used to compare the rotated component matrices of the Afrikaans and Setswana groups in each of the factor solutions. The Tucker's phi coefficients for these comparisons are reported in Table 5.

Table 5

Tucker's Phi Coefficients for Different Factor Solutions

Solution	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Two-factor	0,67	0,41	-	-	-	-
Three-factor	0,93	0,77	0,33	-	-	-
Four-factor	0,87	0,86	0,51	0,21	-	-
Five-factor	0,64	0,65	0,51	0,05	0,24	-
Six-factor	0,82	0,63	0,32	0,22	0,44	0,63

Table 5 shows that the Tucker's phi coefficients of all the comparisons of factor structure were below the guideline of 0,90 (Van de Vijver & Leung, 1997). Therefore, it seems that the agreement between the factor structures of the two language groups was poor.

The subsequent analyses were only conducted on the Setswana group (N = 673). This was done because of the lack of agreement between the factors of the PWS for the two language groups, and because of the relatively small sample size of the Afrikaans group (considering that the participant-to-variable ratio did not exceed the minimum of 5 to 1 recommended by Gorsuch, 1983). Next, 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 principle components analysis was carried out on the 36 items of the PWS in the total sample Setswana speaking adults (n = 637). The results showed that 10 factors had eigenvalues larger than one. Principal component analyses specifying a two-, three, four-, five, and six-factor structure were conducted in the study sample (n = 335). The rotated component matrix for the two-factor structure (which was the most meaningful solution) is reported in Table 6. (Note: The rotated component matrix of the replication sample is also reported in Table 6.)

Table 6 shows that, out of the 36 items, only 4 were complex and problematic (they showed the lowest loadings. These four items are: 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 for 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 *Illness* ("un-wellness") and includes items related to psychological un-wellness ("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 un-wellness ("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 un-wellness ("In the past, I have not always had friends with whom I could share my joys and sorrows"), physical ("I expect my physical health to get worse"), spiritual un-wellness ("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 un-wellness ("I avoid activities which require me to concentrate"; "My life has often seemed devoid of positive mental stimulation").

Table 6

Rotated Component Matrices for Setswana Group

	Study sample		Replication sample	
PW1 I am always optimistic about my future	**0,65**	0,15	**0,47**	0,13
PW2 There have been times when I felt inferior to most of the people I knew	-0,03	**0,47**	0,13	**0,45**
PW3 Members of my family come to me for support	0,27	-0,11	0,30	-0,15
PW4 My physical health has restricted me in the past.	-0,24	0,07	-0,25	0,05
PW5 I believe there is a real purpose for my life.	**0,51**	0,08	**0,62**	0,11
PW6 I will always seek out activities that challenge me to think and reason.	**0,48**	-0,05	**0,55**	0,02
PW7 I rarely count on good things happening to me.	-0,18	**0,42**	-0,09	**0,25**
PW8 In general, I feel confident about my abilities.	**0,54**	0,08	**0,43**	0,25
PW9 Sometimes I wonder if my family will really be there for me when I am in need.	-0,18	0,33	-0,38	0,34
PW10 My body seems to resist physical illness very well.	**0,59**	0,15	**0,59**	0,00
PW11 Life does not hold much future promise for me.	0,16	**0,62**	0,13	**0,57**
PW12 I avoid activities which require me to concentrate.	-0,17	**0,41**	-0,15	**0,38**
PW13 I always look on the bright side of things.	**0,50**	0,02	**0,52**	0,16
PW14 I sometimes think I am a worthless individual.	0,15	**0,60**	0,15	**0,65**
PW15 My friends know they can always confide in me and ask me for advice.	**0,61**	0,12	**0,59**	0,05
PW16 My physical health is excellent	**0,52**	0,13	**0,56**	0,05
PW17 Sometimes I don't understand what life is all about	0,13	**0,64**	0,19	**0,58**
PW18 Generally, I feel pleased with the amount of intellectual stimulation I receive in my daily life.	**0,51**	0,04	**0,48**	-0,12
PW19 In the past, I have expected the best	**0,42**	-0,21	**0,30**	-0,07
PW20 I am uncertain about my ability to do things well in the future.	0,08	**0,49**	0,02	**0,43**
PW21 My family has been available to support me in the past.	**0,44**	-0,08	**0,40**	-0,05
PW22 Compared to people I know, my past physical health has been excellent	**0,46**	-0,04	**0,46**	0,07
PW23 I feel a sense of mission about my future.	**0,66**	0,10	**0,65**	0,03
PW24 The amount of information that I process in a typical day is just about right for me	**0,53**	0,06	**0,52**	0,12
PW25 In the past, I hardly ever expected things to go my way.	-0,18	**0,49**	-0,24	**0,46**
PW26 I will always be secure with who I am.	0,27	-0,16	0,38	-0,10
PW27 In the past, I have not always had friends with whom I could share my joys and sorrows.	-0,01	**0,46**	-0,04	**0,43**
PW28 I expect to always be physically healthy.	**0,48**	0,01	**0,50**	0,11
PW29 I have felt in the past that my life was meaningless.	0,15	**0,63**	0,17	**0,59**
PW30 In the past, I have generally found intellectual challenges to be vital to my overall well-being.	**0,41**	-0,12	**0,34**	-0,16
PW31 Things will not work out the way I want them to in the future.	0,05	**0,46**	-0,09	**0,54**
PW32 In the past, I have felt sure of myself among strangers.	**0,34**	-0,19	**0,33**	0,00
PW33 My friends will be there for me when I need help	**0,49**	0,01	**0,43**	0,02
PW34 I expect my physical health to get worse.	0,17	**0,52**	0,09	**0,46**
PW35 It seems that my life has always had purpose.	**0,58**	0,03	**0,55**	0,14
PW36 My life has often seemed devoid of positive mental stimulation.	-0,12	**0,42**	-0,07	**0,40**

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 component analysis with a varimax rotation was carried out for the two samples (see Table 6). 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 7.

Table 7

Tucker's Phi Coefficients for Sample 1 and the Cross-validation Sample

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

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 8.

Table 8

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
Illness	55,30	12,47	-0,65	0,30	0,74

Table 8 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 8, 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 9.

Table 9

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 9 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 illness ($F_{(3, 597)} = 5,42$; $p < 0,01$; $\eta^2 = 0,03$). 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 illness while Group 4 (older than 51 years) scored the lowest on illness.

Table 9 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

wellness ($F_{(4, 657)} = 5,84$, $p < 0,01$; $\eta^2 = 0,03$). Constables (compared to the other groups) measured higher on perceived wellness as well as illness.

DISCUSSION

The aims of this study were to conceptualise perceived wellness and the dimensions thereof from the literature, to assess the construct equivalence, factorial validity and reliability 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 not found for the factorial invariance of the PWS. Perceived wellness showed a two-factor structure consisting of wellness and illness. Furthermore, differences were found between the perceived wellness of different age groups as well as ranks.

The results indicated that the construct equivalence of the PWS was not acceptable. Although different factor solutions were tested, none of these showed equivalence for the two language groups (i.e., Afrikaans and Setswana speaking police members). Three interpretations can be given for the lack of construct equivalence of the PWS for the two language groups. First, the PWS was translated to two South African languages and it is possible that the meaning of at least some items were lost during the translation process. Second, police members might have found some of the items of the PWS too difficult. Most of the participants had 12 years of education (and even less). Third, it is possible that the lack of factorial invariance was caused by cultural differences.

In the Setswana group, two factors related to well-being were found, namely wellness and illness. Wellness consisted of positive aspects of psychological, emotional, social, physical, spiritual, and intellectual well-being. Illness consisted of the negative aspects of psychological, emotional, social, physical, spiritual, and intellectual un-well-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 illness which were weakly related. This finding is contradictory to the findings of Adams et al. (1997) and Keyes (2002) 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 factor structures were 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 illness factor in this study).

In the Setswana group 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 (illness). This suggests that our results could be interpreted in another way too. It is possible that our results merely reflect the distinction between *wellness* and *unwellness* instead of the differentiation between wellness and illness. 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 items which attracted socially desirable responses or acquiescent responses and such a factor would be a measure only of these response sets. This means that future 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 illness 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 illness, while Group 3 (40-50 years) scored the lowest on illness. 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 illness due to organisational factors (e.g., transformation).

Regarding rank, constables scored statistically significantly higher than other rank groups regarding perceived wellness as well as illness The rank of constable is the lowest rank in the organisation and they might experience problems to cope with conditions in the SAPS (Pienaar & Rothmann. 2005), which might explain their higher scores on illness. Individuals falling in this category are still very young and have the advantage of being in a physically healthy state, do not feel stagnated in their job and still see the work of a police official challenging which contributes to a feeling of wellness. A high feeling of illness 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. This study had, however, several limitations. First, the sample size of the Afrikaans group was relatively small. Although scores were standardised before equivalence analyses were done, the required ratio of items versus participants was not reached. Second, 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).

RECOMMENDATIONS

Several research issues flow from this study. These require attention in order to increase both our understanding of wellness and illness the usefulness of these concept. 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 item content of the PWS in general and 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 for 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 illness. 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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CHAPTER 3

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

In this chapter the conclusions of the study are discussed. This is followed by an analysis of the shortcomings of the study. Finally, the recommendations of the study are made.

3.1 CONCLUSIONS

Next, the conclusions of this study are made for each of the research objectives.

The first research objective was to conceptualise perceived wellness and the dimensions thereof from the literature.

The literature review showed that the definition of health remains the absence of disease, not including a focus on the presence of positive states. However, it was found that attempts have also been made to focus on the continuum of wellness. It was showed that a wellness perspective in the workplace can have a salutary effect on organisational life. This fact has direct import 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 workers.

The literature review also showed that it is important to diagnose wellness of individuals in South Africa. This requires a valid and reliable measuring instrument of wellness in South Africa. Furthermore, before the wellness of cultural groups can be compared, it is necessary to assess the construct equivalence (factorial invariance) of the measuring instrument in these contexts. Construct equivalence indicates the extent to which the same construct is measured across the (cultural) groups under study, in other words, the comparison of cultural groups, seeing that their scores are related to the same construct. In the case of construct in-equivalence, no comparison can be made due to the fact that scores obtained are not related to the same construct.

Based on the work of Ryff and Singer (1998), human wellness was defined 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. It was concluded that 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); and completely unhealthy (high physical and mental morbidity and low physical and mental well-being) (Keyes, 2002).

The literature review showed that complete mental health could be classified in terms of 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).

He focus of this study was one perceived wellness, which was defined as a multidimensional, salutogenic construct which should be conceptualised, measured and interpreted consistent with an integrated systems view. 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 quiets the size of those fluctuations. It was showed 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 (Adams, Bezner, Garner, & Woodruff, 1998).

It was concluded that it is essential to rely on an individual's own perspective when studying wellness. It makes little sense to pronounce a particular person as 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 services.

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. First, subjective perceptions are valid indicators of future objective health. Second, perception forms the basis of cognitive restructuring and lies at the core of several health theories and models. Third, various research findings support the importance of wellness perceptions (Adams et al., 1997).

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). To best describe and predict individual wellness, models should include several dimensions which are operationalized and interpreted consistent with the systems approach (Adams et al., 1997).

The perceived wellness model consists of six dimensions, namely physical, spiritual, psychological, social, emotional, and intellectual wellness. Physical wellness was defined as a positive perception and expectation of physical health, which integrates available health information by accounting for differences in health preferences, values, needs and attitudes. Spiritual wellness refers to a belief in a unifying force between the mind and body or a positive perception of meaning and purpose in life. Psychological wellness is a general perception that one will experience positive outcomes to the events and circumstances of life. Social wellness was defined as 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 refers to the possession of a secure self-identity and a positive sense of self-regard. Intellectual wellness is defined as the perception of being internally energised by an optimal amount of intellectually stimulating activity.

The Perceived Wellness Survey (PWS) (Adams et al., 1997) is a salutogenically-orientated, multidimensional measure of perceived wellness perceptions in the physical, spiritual,

psychological, social, emotional, and intellectual dimensions. It was concluded that 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. The PWS, as a multi-faceted measure of wellness perceptions, has shown early promise as a useful and psychometrically sound scale.

The second objective was to assess the reliability, construct equivalence and validity of the PWS in a sample of police members.

This study showed that the construct equivalence of the PWS was not acceptable. Although different factor solutions were tested, none of these showed equivalence for the two language groups (i.e., Afrikaans and Setswana speaking police members). Three interpretations was offered to explain the poor construct equivalence of the PWS for the two language groups. First, the PWS was translated to two South African languages and it is possible that the meaning of at least some items were lost during the translation process. Second, police members might have found some of the items of the PWS too difficult and did not understand all the items. Third, it is possible that the lack of factorial invariance was caused by cultural differences.

In the Setswana group, two factors related to well-being were found, namely wellness and illness. Wellness consisted of positive aspects of psychological, emotional, social, physical, spiritual, and intellectual well-being. Illness consisted of the negative aspects of psychological, emotional, social, physical, spiritual, and intellectual un-well-being. This finding is contradictory to the findings 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 illness which were weakly related. The fact that the factor structure of the PWS was replicated in the second sample provides support for the two-factor structure.

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 illness factor in this study).

In the Setswana group 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 (illness). This suggests that our results could be interpreted in another way too. It is possible that our results merely reflect the distinction between *wellness* and *unwellness* instead of the differentiation between wellness and illness. This means that future 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 illness 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 illness, while Group 3 (40-50 years) scored the lowest on illness. 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 illness due to organisational factors (e.g., transformation).

Regarding rank, constables scored statistically significantly higher than other rank groups regarding perceived wellness as well as illness. The rank of constable is the lowest rank in the organisation. Individuals falling in this category are still very young and have the advantage of being in a physically healthy state, do not feel stagnated in their job and still see the work of a police official challenging which contributes to a feeling of wellness. A high feeling of illness 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.

3.2 LIMITATIONS

A limitation of this study is its reliance solely on self-report measures. According to Schaufeli, Enzmann, and Girault (1993), the exclusive use of self-report measures in validation studies increases the likelihood that at least part of the shared variance between measures can be attributed to method variance. Adams, Bezner, and Steinhardt (1997) also stated that data are subject to limitations commonly associated with self-report measures and it may lead to a problem commonly referred to as "method-variance" or "nuisance". Another limitation is the size of the sample, specifically the distribution of language groups and the sampling method

The sample was very homogeneous with regard to gender (63,7% male) and race (98,5% black). The research findings can therefore not be generalized. In view of South Africa's diverse population, additional research is needed to explore important demographic variables.

Further studies could benefit greatly by utilising a randomly, stratified sample with the proportionate inclusion of all language groups in the sample. Future studies conducted in this manner will confirm whether bias and equivalence does indeed exist for the different language groups regarding the perceived wellness as measured by the PWS.

Self-selection bias may have existed. In this study, an accidental sample was used. Employees who voluntarily participate in health screenings have been shown to be healthier In future studies, a random sample selection in a controlled classroom setting will add value to the contents of the research. The use of an accidental convenience sample limits the generalization of the findings. Another limitation is the translation within the cultural

framework, although the grammatical structure was correct, participants experienced difficulty in understanding the context and meanings of the items. Restructuring items in terms of the vocabulary features with the help of an expert task team can form the basis for further research in this regard

Further research with larger and a more demographically diverse population would strengthen the findings of this study.

3.3 RECOMMENDATIONS

Recommendations for the organisation and for future research are made in this section.

3.3.1 Recommendation for future research

Several research issues flow from this study. These require attention in order to increase both our understanding of wellness and unwellness and the usefulness of this concept. The concept wellness and well-being is a relatively new construct in South Africa and specifically the existence of a valid and reliable measuring instrument. A first and major issue still relates to the psychometric properties of the Perceived Wellness Survey. 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, race etc). 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 item content. This implies that the wording of certain items may need to be modified in order to make them more appropriate for 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 article, both dimensions were interpreted as wellness versus unwellness Further research can emphasize the meaning of these two factors.

After clarifying these psychometric issues. some further research suggestion can be made The disposition of a reliable and valid measurement instrument for perceived wellness will first of all enable one to assess the prevalence of wellness in South Africa. To that purpose, a representative random sample of the South African working population needs to be surveyed Longitudinal research and trend studies are recommended to establish this.

3.3.2 Recommendations for the organisation

Assuming a wellness perspective in the workplace can have a salutary effect on organisational life. This fact has direct import for employers: Individuals with numerous risk factors for disease tend to be high cost employees in terms of health care. When wellness is emphasized in the workplace, illness-related absenteeism can be reduced, workforce productivity be improved, a company's image be improved and medical costs be lowered. Furthermore, increased creativity and improved quality can take place and employees can have more energy and can be more focused. Healthy workers are more likely to want to come to work, adopt healthy lifestyle, raise healthy families while also being more productive workers (Jandeska & Zapack. 2003).

According to Carr (2003), attempts to increase or boost well-being can include 1) practice random acts of kindness on a regular basis (including greater interest in helping people, act in a pro-social manner, perform courteous behaviours); and 2) count your blessings. Physical activity is one human behaviour that will help both individuals and communities to survive and flourish. At community level in which physical activity is seen as the social norm, may be healthier and increase the social capital of communities.

Primary interventions aim at reducing illness. Interventions that focus on the individual include self-monitoring and assessment, stress management, and promotion of healthy lifestyle. The SAPS can establish wellness centres including gymnasiums, implement wellness policies to enhance participation in sport, accommodate sport events etc. To enhance wellness within the SAPS, management should support planned interventions and focus on employees' coping strategies. Assessment of coping strategies and individual stress coping training might be beneficial and management must try making the organisation inherently less stressful (Rothmann. 2003).

At the level of interface between the individual and the organisation, interventions can include personal screening, training in time management and interpersonal skills, promotion of realistic job image, and balancing work and private life. At the level of the organisation, interventions may include improving the work environment, career management, retraining as well as the promotion of corporate fitness and wellness programmes.

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