

SPORT PARTICIPATION, PSYCHOLOGICAL WELL-BEING AND PSYCHO-SOCIAL DEVELOPMENT IN A GROUP OF YOUNG BLACK ADULTS.

Andrew Malebo

Dissertation (article format) submitted in fulfilment of the requirements for the degree

Magister Artium

in Psychology at the North West University.

Supervisor: Dr. C. van Eeden

Co Supervisor: Prof. M.P. Wissing

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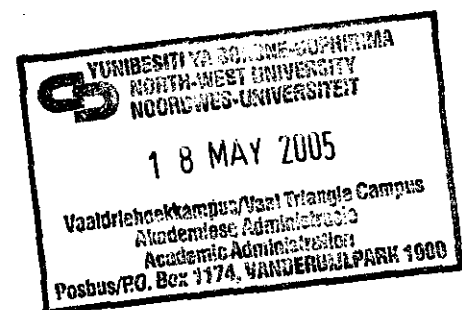


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- The participants in the study without whose inputs this article would not be possible.

SUMMARY

SPORT PARTICIPATION, PSYCHOLOGICAL WELL-BEING AND PSYCHOSOCIAL DEVELOPMENT IN A GROUP OF YOUNG BLACK ADULTS.

Key words: Sport participation, physical activity, psychological well-being, psychosocial development, students, young black adults.

The purpose of this study was to determine whether young black adults who participate in sport differ in psychological well-being and psychosocial development from those who do not participate actively in sport. An availability sample of 293 students between 20 and 35 years old from three tertiary institutions in South Africa completed self report measures. Psychological well-being was assessed by the Affectometer 2 of Kammann and Flett (1983), the Satisfaction with Life scale of Diener et al. (1985), the Sense of Coherence scale of Antonovsky (1987), the Generalized Self-efficacy scale of Wegner, Schwarzer and Jerusalem (1993), the Life Orientation Test of Scheier and Carver (1985) and the General Health Questionnaire of Goldberg and Hillier (1979). Psychosocial development was measured by the Student Development Task and Lifestyle Assessment of Winston, Miller and Prince (1979 in Winston, 1990). The Physical Activity Index of Sharkey (1979) was used to distinguish between sport participants and non-participants. Reliability and validity of instruments were acceptable for use in this particular group. Students who participate actively in sport had significantly lower levels of negative affect, somatic symptoms, symptoms of depression and pessimistic life orientation, and significantly higher levels of positive affect, sense of coherence and self-efficacy beliefs. They also manifested higher levels of purpose and autonomy. Educational and policy implications of findings are indicated.

OPSOMMING

SPORTDEELNAME, PSIGOLOGIESE WELSTAND EN PSIGO-SOSIALE ONTWIKKELING IN 'n GROEP JONG SWART VOLWASSENES.

Sleutelwoorde: Sportdeelname, fisiese aktiwiteit, psigologiese welstand, psigo-sosiale ontwikkeling, studente, jong swart volwassenes.

Die doel van hierdie studie was om te bepaal of jong swart volwassenes wat aan sport deelneem verskil in psigologiese welstand en psigo-sosiale ontwikkeling van die wat nie aktief aan sport deelneem nie. 'n Beschikbaarheidsteekproef van 293 studente tussen 20 en 35 jaar oud het by drie tersiêre instansies in Suid Afrika selfrapporteringsvraelyste voltooi. Psigologiese welstand is bepaal deur middel van die Affectometer 2 van Kammann en Flett (1983), die Satisfaction with Life Scale van Diener et al. (1985), die Sense of Coherence Scale van Antonovsky (1987), die Generalized Self-efficacy Scale van Wegner, Schwarzer en Jerusalem (1993), die Life Orientation Test van Scheier en Carver (1985) en die General Health Questionnaire van Goldberg en Hillier (1979). Psigo-sosiale ontwikkeling was gemeet deur die Student Development Task and Lifestyle Assessment van Winston, Miller en Prince (1979 in Winston, 1990). Die Physical Activity Index van Sharkey (1979) was gebruik om te onderskei tussen sportdeelnemers en nie-deelnemers. Betroubaarheid en geldigheid van die meetinstrumente was aanvaarbaar vir gebruik in hierdie ondergroep. Studente wat aktief aan sport deelneem het beduidende laer vlakke getoon van negatiewe affek, somatiese simptome, simptome van depressie en 'n pessimistiese lewensorientasie, asook beduidende hoër vlakke van positiewe affek, koherensiesin en self-effektiwiteit. Hulle het ook hoër vlakke van doelgerigtheid en outonomie gehad. Opvoedkundige en beleidsimplikasies van die bevindinge word aangedui.

LETTER OF CONSENT

I hereby give consent that Andrew Malebo may submit this manuscript for the purposes of a dissertation.


Dr. C. van Eeden

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Figures and illustrations should preferably be supplied in electronic format, 300dpi, in .tif or .eps format

**SPORT PARTICIPATION, PSYCHOLOGICAL WELL-BEING AND PSYCHO-
SOCIAL DEVELOPMENT IN A GROUP OF YOUNG BLACK ADULTS.**

Sport participation, psychological well-being and psychosocial development in a group of young black adults.

Andrew Malebo, Chrizanne van Eeden* and Marié P. Wissing

***Correspondence to :**

Dr C van Eeden

School of Behavioural Sciences,

North-West University

PO Box 1174

Vanderbijlpark

1900

Sport participation, psychological well-being and psychosocial development in a group of young black adults.

ABSTRACT

The purpose of this study was to determine whether young black adults who participate in sport differ in psychological well-being and psychosocial development from those who do not participate actively in sport. An availability sample of 293 students between 20 and 35 years old from three tertiary institutions in South Africa completed self-report measures of psychological well-being and psychosocial development. Reliability and validity of instruments were acceptable for use in this particular group. Students who participate actively in sport had significantly lower levels of negative affect, somatic symptoms, symptoms of depression and pessimistic life orientation, and significantly higher levels of positive affect, sense of coherence and self-efficacy beliefs. They also manifested higher levels of purpose and autonomy. Educational and policy implications of findings are indicated.

Key words: Sport participation, physical activity, psychological well-being, psychosocial development, students, young black adults.

Sport participation, psychological well-being and psychosocial development in a group of young black adults.

This study focuses on sport participation, psychological wellness and psychosocial development in a group of young black adults at tertiary learning institutions in South Africa, with a view to the eventual enhancement of health and quality of life.

Important psychosocial issues continue to require the attention of authorities at all levels of South African society. These include critical areas such as education, health, housing and welfare. An issue that is of equal importance is sport and recreation. According to the Sports Information and Science Agency (1996) sport participation on a collective level could create a shared identity, connectedness and a sense of belonging which provide the cultural glue that could translate into nation-building. The national euphoria around this country's winning of the 2010 Soccer World Cup bid, proves this point.

Apart from the value of participation in sport for enhancing national well-being, the psychosocial wellness of communities, families and individuals may be promoted by a culture that encourages its youth to engage in sport and other vigorous physical activity. Schools, colleges and universities are the institutions of society through which such a culture, orientated towards health and well-being, can be conveyed. With this in mind, Mc Ewan (1991) pleaded for sport participation as an integral part of all educational programmes, not only because it promotes physical fitness and health but also because it leads to fellowship and encourages the development of self-control, co-operation, loyalty, unselfishness, determination, leadership and many other character-building qualities.

However, the historical sociopolitical context in South Africa led to black youth being deprived of the opportunities and facilities through which they could engage in such health-promoting sport and other physical activities. The question that comes to mind is whether young black adults in South African tertiary institutions manifest concomitant patterns of response to sport participation and psychosocial functioning as those found in Western research groups. Furthermore, cultural factors may play a role in the manifestation of bio-psychosocial health. A paucity of research-

based information on these issues for young black adults in South Africa has prompted the current research interest in sport participation and the psychosocial well-being of a group of young adults at three universities in South Africa.

Young adulthood refers to the period approximately between the ages of 20 and 35 years. Various developmental tasks have to be accomplished by young adults, among others the establishment of their own identity characterized by a unique lifestyle, which entails the development of a stable personality, the establishment of several social roles and tasks as well as the choice of a career and the development of a satisfying work life (Kail & Cavanaugh, 2000). According to Berger and Thompson (1995) young adults compare themselves to peers and significant others in sorting through their multiple self-experiences and in their awareness that they are moving toward the assumption of adult roles and responsibilities and making choices that can have long term implications for their lives.

Young adulthood provides opportunities for advances in cognitive, social and moral development and young adults could be at a point in the evolution of a sense of self-efficacy in mastering life's demands and coping with life's stressful events. According to Wilson, Rodrique and Taylor (1997) this is a period of major growth in self-awareness and self-consciousness, with major advances in the individual's introspective abilities to recognise, differentiate, co-ordinate and control internal processes. In general young adulthood seems to be the optimal period for the development of life skills and interpersonal competencies that will promote psychological well-being and a healthy lifestyle. Such a lifestyle can include recreational patterns and an inclination to sport participation or non-participation.

Apart from the psychosocial development characteristic of young adulthood, Louw and Edwards (1993) indicate that many aspects of physical functioning are at their most effective between the ages of 20 and 30, for example muscle power peaks between 25 and 30, manual dexterity at about 33, and the same applies to visual and auditory acuity. It thus stands to reason that young adults could apply their physical strengths and competence to build and develop capabilities in psychological and social dimensions of functioning and that sport participation and other vigorous

physical activity may be instrumental in accomplishing this (Brodsky, 1988; Etnier et al., 1997; Steinberg, Grieve and Glass, 2001).

The positive association between participation in sport (including vigorous recreational/physical activity) and psychological well-being is well researched and documented. Significant positive correlations between sport participation and aspects of cognitive wellness such as motivation (Etnier et al., 1997), sense of coherence (Hassmen, Koivula & Uutela, 2000), academic achievement (Sanders, Field, Diego & Kaplan, 2000), and creative problem-solving and decreased negative thinking (Schafer, 1992) have been found. Significant positive correlations between sport participation and aspects of the self such as a good self-concept (Goudas, Dermitzaki & Bagiatas, 2001; Schafer, 1992), self-esteem (Rejenski, Shelton, Miller Dunn, King & Sallis, 2001; Walters & Martin, 2000), self-efficacy and perceived self-competence (Butler, 1996; Goudas et al., 2001), self-control (Kerr, 1997) and self-confidence (Fieldsend, 1981) have also been found. The positive association between sport participation and emotional well-being has been found in relation to positive emotions (Fredrickson, 2002), enhancing positive affectivity (Watson, 2002), emotional management (Salovey, Mayer & Caruso, 2002), mood stabilization (Schafer, 1992), emotional wellness (Steptoe, 1996), adaptive emotional release (Schafer, 1992), reduced negative affect (Rejensky et al., 2001 & Schafer, 1992), reduced feelings of depression (Sanders et al., 2000) and reduced emotional distress (Steptoe, 1996). Positive correlation coefficients between sport participation and aspects of adaptive behaviour have been found by Bakker, Whiting and van der Brug (1996) and Steptoe (1996) relating to healthy habits by Muus (1996) for industry and leadership skills and activities, by Paterson (1997) for behavioural conduct and competence, by Thompson (2002) for enhanced personal control, by Steptoe and Wardle (2001) for locus of control and health behaviour, by Dienstbier and Pytlik-Zillig (2002) for toughness and by Schafer (1992) for constructive coping. Significant positive correlations between sport participation and social well-being came from the research findings of Steptoe (1996) on enhanced social involvement, from Kew (1997) and Sanders et al. (2000) on improved close relationships and increased sociability, from Larson (2000) on enhanced secondary socialization, from Hassmen et al. (2000) on feelings of social integration, from

Walters and Martin (2000) on enhanced social skills, leadership status and healthy peer relationships and from Sanders et al. (2000) on improved psychosocial well-being.

In addition to the positive relationships between sport participation and psychological well-being, Hassmen et al. (2000) also found significant negative correlations between sport participation and aspects of psychological distress ranging from perceived stress to suppressed anger, hostility, cynical distrust and depression. Walters and Martin (2000) found significant lower levels of anxiety in sport participants.

For purposes of this research, psychological well-being was conceptualized according to the psychological well-being construct identified by Wissing and van Eeden (2002) which indicated that a sense of coherence, satisfaction with life and a predominantly positive affect are good predictors of psychological wellness. Although some general models of well-being exist (e.g. Adams, Bezner & Steinhardt, 1997; Baker & Intagliata, 1982; Crose, Nicolas, Gobble & Frank, 1992; Eberst, 1984; Seeman, 1989; Witmer & Sweeney, 1992) and models specifically of psychological well-being are beginning to emerge (eg. Frederickson, 2001; Lightsey, 1996; Kumpfer, 1999; Pretorius, 1998; Ryan & Deci, 2000 and Ryff & Singer, 1998) there is to date no generally accepted model of psychological well-being (Wissing & van Eeden, 2002). Models that include physical well-being or a positive health status as an integral component of general well-being are those of Antonovsky (1979), Baker and Intagliata (1982), Crose et al. (1992), Eberst (1984), Ryff and Singer (1998), Seeman (1989) and Witmer and Sweeney (1992). According to all these models physical fitness, exercise or any form of vigorous physical activity on a regular basis leads to enhanced immune efficiency, positive health status, improved neurological functioning, high energy levels and slower ageing processes on a physical level, whilst on a psychological level, it leads to a perceived quality of life characterized by effective stress management, adaptive coping behaviour, a healthy self-concept, stable affect, cognitive clarity and satisfying social skills and relationships, and, on a spiritual level, an appreciative sense of the meaning of life. Based on the above, indices of optimism, self-efficacy and general health were also included in this investigation.

Psychosocial development in young adults was conceptualized by Chickering and Reisser (1993:2) as *a series of developmental tasks or stages, including qualitative changes in thinking, feeling, behaving, valuing and relating to others and to oneself*. The stages or challenges facing young adults were identified by Chickering and Reisser as: developing competence, managing emotions, moving through autonomy toward independence, developing mature interpersonal relationships, establishing identity, developing purpose and developing integrity. This model was operationalized with the Student Developmental Task and Lifestyle Assessment of Winston, Miller and Prince (1979, in Winston, 1990).

It is interesting to note that Chickering and Reisser emphasized the significant impact that institutions of higher learning traditionally have on student development in the above-mentioned stages or tasks and came to the conclusion that *human development should be the organizing purpose of higher education* (1993:265).

From the above it seems clear that sport participation and psychological well-being is concomitant and that young adulthood may be a susceptible life phase in which to promote wellness-enhancing behaviour through the development of a healthy lifestyle. Most of the research previously conducted in this field was conducted amongst White and Western adolescents and adults. It is therefore important to verify this pattern of findings also among black participants, particularly in view of historical imbalances in recreational and sport opportunities, in order to provide an empirical base for policy recommendations and further action.

The aim of this study was to determine whether young black adults who participate in sport differ in psychological well-being and psychosocial development from other young black adults who do not participate in sport or other vigorous physical activity.

METHOD

Participants

An availability sample of 293 black students at three tertiary institutions in the Vaal Triangle and Secunda participated in this research. They were all between 20 – 35 years old, 151 were males, 142 were females, 189 participated in sport while 104 did not.

Measuring Instruments

The Physical Activity Index (PAI) of Sharkey (1979). The PAI was developed to assess the nature and level of physical activity in individuals. The scale measures five categories of activity namely intensity, duration, frequency, summer participation and winter participation.

Respondents are required to indicate their level of physical activity for summer and winter by using a scale from five (high) to one (low). The level of activity is calculated by multiplying the score for each category: $\text{Score} = \text{Intensity} \times \text{Duration} \times \text{Frequency}$ (Sharkey, 1984). Higher scores indicate higher levels of sustained physical activity. Categorical distinctions in this study, were made according to the criteria of Sharkey (1979). Scores from 40 to 100 identified active sport participants, while scores below 40 indicated non-participants. The PAI has been successfully used in studies by Boshoff (1998), Fourie (1999), Rabie (1999), Sharkey (1997) and Wilders (2002). Although reliability and validity indices were not specified in these studies it can be inferred that the PAI had acceptable reliability and validity for use in the specific groups.

The Affectometer 2 (AFM) of Kammann and Flett (1983). The shortened form of the AFM consists of 20 items and measures general happiness or emotional well-being. The overall level of affect balance (PNB) is indicated by the extent to which positive feelings (subscale AFM-PA) predominate over negative feelings (subscale AFM-NA). Kammann and Flett (1983) report alpha reliability indices of 0.88 to 0.93 and indications of validity. Brown (2002) found this scale valid for use in South African groups with alpha-reliability scores of 0.83 and 0.84.

The Satisfaction with Life Scale (SWLS) of Diener, Emmons, Larsen and Griffen (1985) The SWLS uses five items to measure a person's assessment of his/her quality of life according to personal criteria. Diener et al. (1985) report an alpha-reliability index of 0.87 and a test-retest reliability index of 0.83. After revision of the scale Pavot and Diener (1993) attest to the good

validity and reliability thereof. Van Eeden (1996) and Koen and Wissing (2002) found the SWLS valid for use in South African groups with reliability indices of 0.79 and 0.84. Higher scores indicate higher satisfaction with life.

The Sense of Coherence Scale (SOC) of Antonovsky (1987). The SOC (a 29-item self-report questionnaire) measures an individual's orientation to his/her life according to its comprehensibility, manageability and meaningfulness. According to Antonovsky (1993), the SOC had internal reliability indices of 0.78 to 0.93 as found in 26 different studies and test-retest reliability scores of 0.56 to 0.96. Good content and criterium validity was reported. Wissing and van Eeden (2002) found the SOC to be valid and reliable (0.85) in a South African group. Higher scores indicate a higher sense of coherence.

The Generalized Self-efficacy Scale (GSe) of Wegner, Schwarzer and Jerusalem (1993). The ten item GSe scale measures an individual's general sense of self-efficacy in coping with life's daily hassles and in adapting to stressful situations or circumstances. A higher score indicates a high sense of self-efficacy. Wegner, Schwarzer and Jerusalem (1993) report alpha reliability scores of 0.82 to 0.93 and test-retest reliability indices of 0.47 to 0.63. Good construct validity was also found. In South African studies Brown (2002) and Dreyer (2003) found the GSe valid for use and reported reliability indices of 0.84 and 0.83 respectively.

The Life Orientation Test (LOT) of Scheier and Carver (1985). The LOT measures optimism as a dimension of personality. According to Scheier and Carver (1985) it refers to a general expectancy that positive outcomes will predominate in life experiences. The LOT consists of 12 items in two subscales (LOT-P and LOT-N as well as four filler items) and the total (LOT-T) indicates the person's subjective experience of optimism. High scores on the LOT-P show manifested optimism and high scores on the LOT-N indicates manifested pessimism. Scheier and Carver (1985) report good convergent and discriminant validity of the LOT and a reliability coefficient of 0.76. Brown (2002) and Dreyer (2003) found reliability scores of 0.86 and 0.69 for the LOT-T respectively and attest to the validity of the LOT for use in South African samples.

The General Health Questionnaire (GHQ) of Goldberg and Hillier (1979). The GHQ (a 28 item version) was designed to detect common symptoms of mental dysphoria and to differentiate

individuals with pathology as a general class from those who are seen to be normal. A total score is obtained as well as subscale scores for somatic symptoms, anxiety and insomnia, social dysfunction and depression. Lower scores indicate fewer symptoms of dysphoria. Goldberg and Hillier (1979) and Goldberg et al. (1997) report internal consistency coefficients of 0.69 to 0.94 as well as good validity indices for the GHQ across various cultures. Brown (2002), Dreyer (2003) and Wissing and van Eeden (2002) found reliability coefficients from 0.84 to 0.96 and good validity indices in South African studies.

The Student Developmental Task and Lifestyle Assessment (SDTLA) of Winston, Miller and Prince (1979, in Winston, 1990). According to Watt and Vodanovich (1999), the aim of the SDTLA is to assess psychosocial development in students of higher education from 17-24 years of age. Areas or tasks of psychosocial development assessed by the SDTLA (a 153-item questionnaire) are: establishing and clarifying purpose, developing autonomy, having mature interpersonal relationships. Each task is divided into subtasks. In addition the SDTLA has the Salubrious Lifestyle Scale to assess a lifestyle consistent with or promoting good health and wellness practices. According to Winston (1990) sufficient reliability and validity data have consistently been found for the SDTLA. Watt and Vodanovich (1999) reported reliability scores of 0.91, 0.86, 0.75 and 0.74 for the above-mentioned sub-scales measuring developmental tasks. No South African research on the SDTLA could be found.

Procedure

All the questionnaires used in this study (in English only) were bound in a booklet form and presented to a pilot group (N=10) to complete in order to do a preliminary evaluation of the applicability of all the scales. After feedback was received the SDTLA was adapted for use in South African groups by replacing some obviously American college terminology with more commonly used terms in the local higher education vernacular. The edited booklet was again given to another pilot group (N=15) and satisfactory results were obtained. On three campuses participants were approached (with the necessary permission and assistance of deans and heads of departments), the research aims and procedures explained and their informed consent

obtained. The questionnaires were completed in groups under the supervision of the first author who is a registered psychometrist. All the ethical requirements were adhered to.

Statistical analyses

By using the STATISTICA computer programme, descriptive statistics and Cronbach alpha reliability coefficients were computed for each scale and/or subscale. By means of the SEPATH option of STATISTICA and confirmatory factor analyses the validity of the scales was determined. The significance of differences between the means of sub-groups was established with a multivariate analysis (Hotelling T^2) and followed up with t-tests for unrelated samples to determine among which individual (sub-)scales differences would be found. Practical significance is indicated with Cohen's effect sizes.

RESULTS AND DISCUSSION

Reliability and validity of measures

Reliability and validity of measuring instruments are indicated in Table 1. Reliability indices were acceptable for all the measuring instruments used. The reliability scores obtained in this study were similar to those reported in literature. The construct validity of the scales used was examined with the aid of the confirmatory factor analyses option of structural equation modeling, using the Sepath option of Statistica. An acceptable fit is indicated when all the items prove to be significant estimates of the underlying model/construct, and the fit of the total model as indicated by an Steiger-Lind RMSEA-index, is lower than 0.1, and specifically lower than 0.08 (Kenny, 2004).

[Table 1]

Table 1 indicates that the RMSEA point estimates of the SOC, AFM, GSe, LOT and GHQ meet the Sepath requirements for each particular scale's data to fit the hypothesized model acceptably (RMSEA = < 0.10 with 90% confidence interval of 0 to 0.10). It was thus concluded that the construct validity of all five of these scales was confirmed and that they were valid for use in this group.

As far as the SWLS and the PAI were concerned, confirmatory factor analyses with the Sepath option of Statistica revealed that all items were significant estimates of the underlying constructs, but that a marginally acceptable fit of the hypothesized models was obtained for both scales (90% confidence intervals = 0.017 to 0.120 and 0.031 to 0.176). The upper limits of the confidence intervals were too high, which meant that interpretations should be made with caution. This may, however, be due to the fact that both these scales are very short. The SWLS has extensively been used in South African research and based on the results of Wissing et al. (1999) and Wissing and van Eeden (2002) as well as the results obtained by Diener (2000) and Pavot and Diener (1993) who all attest to the validity of the SWLS in various cultural groups, it was tentatively accepted that the SWLS could be used in the present research group. The PAI has good content validity as was evident from its high reliability score as well as the fact that a confirmatory principle component factor analysis revealed one factor with an eigenvalue of 5.20 and explaining 74.4% of the total variance. It was thus assumed that in spite of the Sepath estimates discussed above, the PAI had sufficient validity for use in this group.

The SDTLA is a complex scale with four main sub-scales consisting of four, four, two and one facets respectively. As is evident from Table 1, the scale as a whole manifests acceptable construct validity as indicated by the Steiger-Lind RMSEA-index. The Salubrious Lifestyle subscale (SDTLA-Lfst) however, did not manifest trustworthy validity in spite of its fairly good reliability index. The reason for this is not clear. This sub-scale addresses a small sample of wellness practices and attitudes important for young adults and the poor validity obtained in this research group may indicate that health and wellness manifest differently in this group of African respondents compared to the mostly American respondents of the norm sample. It may also indicate cultural differences in bio-psychosocial health and well-being. The SDTLA-Lfst will be excluded from further discussion of results in this study. As far as could be determined the SDTLA has not been used in the South African context and especially using black respondents as the research population. The SDTLA is an interesting measuring instrument (albeit a very long one) and further research on the local validation of this index is necessary.

Differences between sport participants and non-participants.

A Hotelling T^2 multivariate analysis indicated significant differences between sport-participating (SP) and non-sport participating (NSP) participants ($T^2 = 393.439$ $F(19, 273) = 19.426$, $p < 0.0000$). Table 2 shows the statistical and practical significance of differences between the SP and NSP groups on indices of psychological well-being and psychosocial development.

[Table 2]

Sport participants experienced statistically significantly lower levels of negative affect (AFM-NA) and higher levels of affect balance with predominantly positive affect (AFM-PNB) than non-participants. These differences were of small practical significance. This finding agrees with that of Rejensky et al. (2001), Steptoe (1996) and cited by Watson (2002). Sport participants also have a statistically significant higher sense of coherence (SOC) than non-participants, and this difference is of medium practical significance. This finding agrees with what was hypothesized by Antonovsky (1987) and with the findings of Hassman et al. (2000). The statistical and practical (small effect) significantly higher sense of generalized self-efficacy (GSe) found in sport-participating respondents in this study agrees with the findings referred to by Butler (1996). The lower levels of pessimism (LOT-N) and higher levels of subjectively experienced optimism (LOT-T) found in the sport participants (medium effect practical significance) in this study correspond with those referred to by Pederson (2002) and Sarafino (2002). The fewer symptoms of somatic (GHQ-Som) and depressive (GHQ-Dep) discomfort apparent in this group of sport participants agree with results reported by Steptoe (1996). All the studies referred to above, were done on mostly white and multicultural groups in Britain and the USA.

As far as psychosocial development is concerned, sport-participating respondents in this study showed significantly higher indications of having established and clarified their educational goals, career plans, personal life direction and cultural belongingness (SDTLA-Pur); of having been able to meet their own needs, to structure their lives in order to function responsibly, to devise successful academic strategies and to contribute to community life (SDTLA-Aut). Differences are highly practically significant. These findings agree with those cited by Bakker et al. (1996) and reported by Steptoe and Wardle (2001), who reported correlations between sport participation

and adaptive behavioural practices. The contribution of the current study is the indication that sport participation is linked to a greater degree of maturity in specific facets of psychosocial development mentioned above.

The current study with a group of young black adults thus revealed similar patterns of a more salubrious quality of life and psychosocial well-being for sport participants in comparison to non-sport participating young adults, as is reported for more privileged (white) groups on which most of the previous research in this regard has been done. Notwithstanding the fact that students might have had more access to opportunities for sport-participation than is generally available to people in other communities, the current findings point to the great opportunity to use sport-participation as a possible preventative and health-enhancing mechanism – specifically in poorer and underprivileged communities with low resources.

Findings from this study can promote the understanding of both psychologists and primary health care professionals and politicians of the beneficial role that physical activity, exercise and sport participation can play in the enhancement of psychological and social wellness in young adults. Furthermore, with sport now depoliticised in South Africa, addressing of disparity can be done through sport development programmes. Information flowing from research projects such as this one can support policy for better provision of resources in communities and the development of programmes with lasting bio-psychosocial relevance.

A limitation of this study is that an availability sample was used, and generalizations can thus not be made. Another limitation may be the fact that only self-report indices were implemented. In spite of these limitations, the findings of this study suggest the value that sport-participation may have for the psychological well-being and psychosocial development of young black adults / students, and thus the necessity to urgently provide opportunities for sport participation for people, especially in communities with low resources.

CONCLUSION

In this study the differences in the manifestation of psychological well-being and psychosocial development of young black adults, who participate in sport and those who do not, was investigated. Sport participants manifested higher levels of wellness on various facets of

psychological well-being and psycho-social development. Although causality cannot be deducted in the current study, it can be assumed from previous studies that sport participation has a wellness-enhancing effect (it may however, also be that people with higher psychosocial well-being are more inclined to take part in sport and other physical and recreational activities).

In the South African context where the moral regeneration of youth and, by implication, crime prevention and health promotion are priorities on the Government's agenda, research findings such as those of this study could serve as indicators for policy design and for the development of programmes in which sport participation and/or other constructive physical activity could be developmental assets (Peterson and Seligman, 2004). Such developmental assets would serve as protective factors to youth in high risk families or communities and could not only prevent psychosocial dysfunction, but also promote resilience and the building of character strengths (Seligman, 2002; Shields & Bredemeir, 1995). Educational institutions are ideally (although not exclusively) equipped for the task of developing and implementing programmes to instill bio-psychosocial values, skills, strengths and an overall quality of life in youth and young adults. Participation in sport and other creative physical activities prove to be powerful behavioural instruments with which to accomplish the establishment of positive, health-oriented personal strengths, that will promote a lifestyle of health and well-being, both physically and psychosocially.

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Table 1: Reliability and validity indices of measuring instruments: Chronbach
alpha coefficients and Steiger-Lind RMSEA Indices with 90% confidence
intervals (N: 293)

Scale and Subscale	RMSEA indices (with 90% confidence intervals)			Chronbach alpha
	Lower conf. bound	Point estimate	Upper conf. bound	
PAI	0.031	0.098	0.176	-
AFM-PA				0.77
AFM-NA				0.80
AFM-PNB	0.044	0.053	0.063	0.88
SWLS	0.017	0.069	0.120	0.66
SOC	0.053	0.059	0.066	0.83
GSe	0.038	0.060	0.083	0.76
LOT-P				0.74
LOT-N				0.71
LOT-T	0.000	0.034	0.056	0.76
GHQ-Som				0.67
GHQ-Anx				0.69

GHQ-SD				0.67
GHQ-Dep				0.72
GHQ-T	0.048	0.055	0.061	0.93
SDTLA-Pur	0.027	0.032	0.036	0.95
SDTLA-Aut	0.054	0.057	0.060	0.88
SDTLA-Rel	0.045	0.052	0.060	0.61
SDTLA-Lfst	0.092	0.102	0.112	0.74

Note: PAI = Physical Activity Index, AFM-PA = Affectometer: Positive Affect, AFM-NA = Affectometer: Negative Affect, AFM-PNB = Affectometer: Affect Balance, SWLS = Satisfaction With Life Scale, SOC = Sense of Coherence, GSe = Generalised Self-efficacy, LOT-P = Life Orientation Test: Optimism, LOT-N = Life Orientation Test: Pessimism, LOT-T = Life Orientation Test: Total Score, GHQ-Som = General health Questionnaire: Somatic Symptoms, GHQ-Anx = General health Questionnaire: Anxiety and Insomnia, GHQ-SD = General health Questionnaire: Social Dysfunction, GHQ-Dep = General health Questionnaire: Depression, GHQ-T = General Health Questionnaire: Total Score, SDTLA-Pur = Student Developmental Task and Lifestyle Assessment: Purpose, SDTLA-Aut = Student Developmental Task and Lifestyle Assessment: Autonomy, SDTLA-Rel = Student Developmental Task and Lifestyle Assessment: Relationships, SDTLA-Lfst = Student Developmental Task and Lifestyle Assessment: Salubrious lifestyle

Table 2: Significance of differences between sport participants (SP) (n= 189) and non-participants (NSP) (n = 104) on indices of psychological well-being and psychosocial development as determined with t-tests for unrelated samples.

Scale and Subscale	SP		NSP		p	d
	M	SD	M	SD		
AFM-PA	27.89	6.53	27.01	6.28		
AFM-NA	12.98	7.90	14.67	6.86	**	♦
AFM-PNB	14.91	12.34	12.34	10.61	**	♦
SWLS	24.41	6.64	23.60	6.08		
SOC	133.27	22.28	126.68	18.78	*	♦♦
GSe	31.17	5.05	30.15	4.76	**	♦
LOT-P	11.97	3.20	11.49	3.54		
LOT-N	7.77	3.69	8.81	3.56	*	♦♦
LOT-T	20.21	5.22	18.68	5.04	*	♦♦
GHQ-Som	1.70	1.70	2.12	2.04	**	♦
GHQ-Anx	1.72	1.92	1.77	1.81		
GHQ-SD	1.40	1.69	1.59	1.73		
GHQ-Dep	1.13	1.64	1.52	1.85	**	♦
GHQ-T	5.95	5.58	6.99	5.62		
SDTLA-Pur	160.71	29.28	135.35	24.75	*	♦♦♦
SDTLA-Aut	177.57	23.06	163.89	18.16	*	♦♦♦
SDTLA-Rel	85.98	11.98	84.45	10.26		
SDTLA-Lfst	57.80	9.59	53.90	8.73	*	♦♦

Note: PAI = Physical Activity Index, AFM-PA = Affectometer: Positive Affect, AFM-NA = Affectometer: Negative Affect, AFM-PNB = Affectometer: Affect Balance, SWLS =

Satisfaction With Life Scale, SOC = Sense of Coherence, GSe = Generalised Self-efficacy, LOT-P = Life Orientation Test: Optimism, LOT-N = Life Orientation Test: Pessimism, LOT-T = Life Orientation Test: Total Score, GHQ-Som = General health Questionnaire: Somatic Symptoms, GHQ-Anx = General health Questionnaire: Anxiety and Insomnia, GHQ-SD = General health Questionnaire: Social Dysfunction, GHQ-Dep = General health Questionnaire: Depression, GHQ-T = General Health Questionnaire: Total Score, SDTLA-Pur = Student Developmental Task and Lifestyle Assessment: Purpose, SDTLA-Aut = Student Developmental Task and Lifestyle Assessment: Autonomy, SDTLA-Rel = Student Developmental Task and Lifestyle Assessment: Relationships, SDTLA-Lfst = Student Developmental Task and Lifestyle Assessment: Salubrious lifestyle

* $p < 0.05$; ** $p < 0.01$;

d=Cohen's effect size: • = small effect size, ♦♦ = medium effect size, ♦♦♦ = large effect size

Hotelling T^2 (casewise MD) = 393.439 $F(19,273) = 19.426$ $p < 0.0000$