

Perceived benefits and barriers to physical exercise participation of first year university students

V .T NOLAN, M. SANDADA AND J. SURUJLAL

*Faculty of Management Sciences, Vaal University of Technology, Private Bag X021,
Vanderbijlpark 1900, Republic of South Africa E-mail: babs@vut.ac.za*

Abstract

Regular participation in exercise is associated with disease prevention and provides many benefits. Physical exercise plays a key role in the promotion of good health. However, very few young people participate in physical exercise. The purpose of this study was to identify the perceived benefits and barriers to participation in physical exercise among first year students in a South African university. A quantitative approach was used. Academics at three different campuses at Vaal University of Technology (South Africa) administered an adapted version of the Exercise Benefits Barriers Scale (EBBS) to first year entering university students. Descriptive, one-way repeated measure ANOVA and independent t-tests were applied to determine the perceived benefits and barriers associated with participation in physical exercise. The study identified lack of facilities and tiredness as the constraining factors. Improved health, physical performance, psychological outlook and life enhancement were perceived as the strongest benefits. First year students perceive participating in exercising to have more benefits than adverse effects. As a result, students will be more motivated to overcome the barriers they face and hinder them in their participation in physical exercise in order to make physical exercise part of their daily lives.

Key words: Benefits, barriers, physical exercise, university students, health, participation

How to cite this article:

Nolan, V.T., Sandada, M. & Surujlal, J. (2011). Perceived benefits and barriers to physical exercise participation of first year university students. *African Journal for Physical, Health Education, Recreation and Dance*, September (Supplement 1), 56-69.

Introduction

Regular participation in exercise activities is associated with disease prevention and has many physical, psychological and physiological benefits (Lopez, Gallegos & Extremera, 2010). However, despite the extensive body of literature that documents the health benefits of physical activity participation among young people, evidence shows that very few young people participate in physical exercises (Daskapan, Tuzun & Eker, 2006). Schutzer and Graves (2004) have noted that although there are perceived benefits of exercises, there are several barriers that hinder exercise participation. Given the high prevalence of obesity and obesity-related health problems (Lovell, Ansari & Parker, 2010) increased research efforts are needed to explore the perceived benefits and barriers of exercise participation by university students. Information gleaned from such research could contribute to designing relevant intervention policies and programmes to promote the health consciousness of the young population.

Schutzer and Graves (2004) define physical activity as any movement of the body that is produced by skeletal muscles and requires the use of energy. Physical activity sub-categories include exercise, leisure-time physical activity, and lifestyle activity (Henderson & Ainsworth, 2003). Exercise is viewed as planned, purposeful and structured training to gain physical fitness, whereas leisure-time physical activity comprises any physical activity carried out during one's spare time, and lifestyle activity comprises activities such as gardening, yard work, house work and climbing stairs (Henderson & Ainsworth, 2003). This study adopts a definition of physical exercise suggested by Slattery, Edwards, Khe-ni, Friedman and Potter (1997), where both moderate and vigorous activities are considered as categories of physical activities. Moderate activities consist of brisk walking, raking, gardening, cleaning windows, mopping floors, swimming, canoeing, volleyball, jogging, walking uphill leisurely, mowing the lawn and weeding. Some of the vigorous physical activities include strenuous physical activities such as weightlifting, jogging or running fast, aerobic dance, fast swimming, shovelling, chopping wood, gardening with heavy tools, tennis, basketball, soccer, and cross country at increased speed (Slattery et al., 1997).

There are varied benefits that are associated with participation in physical activities. Using evidence of a cross-sectional study in Finland, Hassmen, Koivula and Uutela (2000) showed that active participation in physical exercise results in lower depression, anger, cynical distrust, and stress. The study further indicated that regular exercisers enjoy healthier lives and general well being as well as higher levels of physical fitness and a stronger feeling of social integration and higher levels of coherence than those who do not exercise. The importance of physical exercise was also reinforced by Salmon's (2001) study that reported that exercise training has antidepressant effects because exercisers develop enduring resilience to stress and consequently reduce premature mortality. Furthermore, Dubbert (2002) identified several benefits associated with physical exercise participation which include: reducing obesity, maintaining healthy joints, controlling pain, building stronger bone mass as well as improving endurance, strength and balance. Arora, Stoner and Arora (2006) enumerated the gains of exercise such as reducing risk of heart disease, reducing cholesterol levels, regulating sugar levels thereby reducing risk of developing diabetes, maintaining body weight or reducing body fat and hence obesity, building and maintaining healthy muscles, bones and joints, and for preventing cancer. Cokerill (1995) posits that physical exercise promotes self-esteem and self-efficacy. This is resonated by Henderson and Ainsworth (2003) who claim that physical exercise is associated with feeling good, being with others, maintaining a healthy life, and experiencing spiritual and psychological gains.

Six major perceived benefits to physical exercise are reported in the study by O'Dea (2003). First are the social benefits that include fun or enjoyment,

socialising with friends and team mates, and developing life skills. Second are the psychological enhancement gains such as sense of achievement, pride and self-esteem, mood invigoration, discipline development, and enjoyment of goals and challenge realisation. The third group of benefits are the physical sensation gains that enable exercisers to feel good physically in aspects such as feeling of refreshment, energy boosting, fatigue reduction, increased fitness and strength as well as enhanced sleep. An enhanced performance in sports is the fourth benefit and it covers skill development and an improvement in fitness, strength, endurance, agility, muscle flexibility, and reflexes. The fifth class of benefits are cognitive gains that consist of mind clearing and thinking, enhancement of concentration and brain function. Finally the coping benefits are those gains of physical exercise that encompass stress relief, relaxation, distraction from worries, reduction in aggression, frustration, and anger.

The benefits of physical exercise are further highlighted by Blomstrand, Björkelund, Arai, Lissner and Bengtsson (2009) whose cross-sectional analysis of Swedish women reports strong associations between physical exercise activity and the experience of well-being. The study found that increased physical exercise participation promotes both health and well-being of exercisers. Similarly, in their study of around 8000 respondents in the Netherlands, Stubbe, de Moor, Boomstra, and de Geus (2007) report that exercisers are more satisfied with their life and are happier than non-exercisers. The study concluded that there is a strong relationship between physical exercise participation and high levels of life satisfaction and happiness. Recent evidence about the importance of exercises in producing positive physiological and health benefits is presented by Lovell et al. (2010) and Burke and McCarthy (2011). According to Lovell et al. (2010), the perceived benefits from exercise were: physical performance, psychological outlook, preventive health, life enhancement, and social interaction. This is consistent with Burke and McCarthy's (2011) findings on the lifestyle behaviours and exercise beliefs of undergraduate student nurses in Ireland which noted that physical exercise is beneficial as it helps to achieve ideal body images and a sense of personal accomplishment.

With regard to barriers to physical exercise participation, substantial evidence exists to show that many perceived barriers exist to inhibit people from adopting and maintaining an active lifestyle (Schutzer & Graves, 2004; Daskapan et al., 2006; Burke & McCarthy, 2011). A barrier to physical exercise is described by Henderson and Ainsworth (2003) as a constraint that inhibits a person from being physically active. In their study of perceptions about physical activity among older African American and American Indian women, Henderson and Ainsworth (2003) reported that the perceived constraints include a range of problems such as finding time and space to exercise, time constraint, job demands, physical tiredness and illness, major life changes or traumas, safety issues, disabling weather and environment, the bother of personal care such as

hair dressing and showering, lack of facilities and opportunities. It is interesting here to note that Henderson and Ainsworth (2003) report about physical tiredness as one of the barriers found in their study but O'Dea (2003) reports that physical exercise is beneficial as it reduces tiredness.

Higgins, Lauzon, Yew, Bratseth and McLeod (2010) found that issues of time, finances, workload, and lack of accessible and affordable facilities were major barriers inhibiting Canadian university students from wellness programmes. Lopez et al. (2010) identified both internal and external perceived barriers by Spanish university students in the practice of physical exercise activities. While on one hand external barriers refer to constraints such as time constraints and lack of social support, on the other hand internal constraints are barriers ranging from disliking exercise, ignorance about the benefits of exercise, laziness, and lack of confidence in one's ability to exercise (Lopez et al., 2010). Similarly, high school students interviewed in Canada by Allison, Dwyer and Makin (1999) reported that time constraints due to schoolwork, existence of other interests and family activities were barriers that were considered as important. Other constraints were mood, lack of energy, lack of self-discipline, discomfort, cost, stress, lack of family and friends support, illness and injury (Allison et al., 1999).

Reichert, Barros, Domingues and Hallal's (2007) study found a strong association between physical inactivity and lack of money, feeling too tired, dislike of exercising, and lack of company. Besides time constraints and lack of social support, the other major barriers identified by O'Dea (2003) were preference for indoor activities, low level of energy, lack of self-motivation, low levels of motivation from others and low perceived rewards. Schutzer and Graves (2004) found environmental constraints including absence of sidewalks, parks, recreation centres, fitness facilities and security, as barriers to exercise. The authors also state that lack of physician advice and lack of knowledge can also negatively affect exercise participation. The other barriers to physical exercise include lack of information and expensive facilities (Samir, Mahmud & Khuwaja, 2011), long distance to exercise facilities (Burke & McCarthy, 2011) and family discouragement (Lovell et al., 2010).

Very few studies have been conducted to identify first year university students' perceived benefits and barriers of exercise activity which is lacking. This study attempts to fill the gap in research. Universities are well-positioned health promotion stakeholders since they offer the 'last opportunity' in the provision health and wellness education especially to incoming or first year university students (Higgins et al., 2010).

The study is necessary because physical exercise is now regarded to play a key role in the promotion of good health. In order to promote a healthy young population, it is crucial for stakeholders to have an insight the perceived benefits

and barriers to physical exercise in South Africa. The outcome of this study could inform policy holders and other stakeholders about the development of policy and intervention strategies to promote the health of young adults. The current study is the first phase of a longitudinal study. The researchers intend to replicate the study with the same sample in their third year of study to ascertain whether similar perceived barriers and benefits still exist. It would be interesting to determine if and how the perceived benefits and barriers have changed as students' progress towards their final year and to enter the workforce. Steptoe, *et al.* (2002) found that beliefs about the importance of regular exercise remained stable overall over a decade.

The purpose of this study was to identify perceived benefits and barriers to physical exercise in first year university students in South Africa. To achieve the purpose of the study, the following objectives are formulated:

- To ascertain the perceived benefits and barriers to exercise among first year university students
- To identify if differences exist between male and female university students' perception of benefits and barriers to exercise.

Methodology

Sample

Purposive sampling was used to select 507 first year university students from three university campuses in the Gauteng province of South Africa. Patton (2002) describes a purposive sample as a non-representative subset of some larger population (in this study first year freshman university students) and is constructed to serve a very specific need or purpose. In this study, the participants were incoming students who were doing their freshman year regardless of academic programmes.

Of the 507 questionnaires administered, 462 (91%) completed questionnaires were returned. The mean age of the first year students was 19.98 ± 2.25 years and almost all the students were single (99%). More female students (58%) than male students (42%) participated in the study. Most students (45%) perceived their fitness level as moderate active, 30% followed an on-off active lifestyle; 22% were very active and only 3% indicated that they lead sedentary lifestyle.

Instrument and procedures

In order to identify the perceived benefits and barriers associated with physical exercise participation among first year university students, an adapted version of a reliable and validated instrument, the Exercise Benefits Barriers Scale (EBBS)

(Sechrist, Walker & Pender, 1987) was used. The questionnaire comprised two sections. Section A requested the participants to provide demographic information. Section B of the questionnaire sought responses regarding benefits and barriers associated with participation in physical exercise. Items in Section B of the questionnaire were scored on a four-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (4).

The benefit component comprised 29 questions categorised into five subscales: life enhancement (8 questions), physical performance (8 questions), psychological outlook (6 questions), social interaction (4 questions) and preventative health (3 questions). The barrier component comprised 14 questions categorized into four subscales: exercise milieu (6 questions), time expenditure (3 questions), physical exertion (3 questions) and family discouragement (2 questions). For the current study, the internal consistency for the benefit component was $\alpha=0.866$ and $\alpha=0.692$ for the barrier component. The overall internal consistency for Section B was $\alpha=0.737$. Both these consistencies were within the suggested benchmark of 0.7 (Nunnally, 1978:245) indicating that the benefit and barrier scale are reliable.

Academics at three different campuses were requested to administer the questionnaires to first year students. While a non-probability convenience sampling procedure was utilized, randomisation of data collection was ensured by administering questionnaires at three different campuses. This also allowed for a large number of questionnaires to be administered to respondents in a relatively short period of time (Churchill, 2001).

Data analysis

The returned questionnaires were subjected to editing and coding for input into the Statistical Package for the Social Sciences (PASW Statistics – version 18 for Windows). To ascertain the perceived benefits and barriers of participation in physical exercise, percentages were calculated for each EBBS question. To establish the greatest perceived benefit of exercise as well as barrier(s) with strongest inhibiting effect to exercise, a one-way repeated measure ANOVA was applied. The independent t-test was applied to test if there is a significant difference between female and male students' perception of benefits and barriers to exercise activities. Cohen's D was also applied to determine the practical effect of the statistical significance difference. A value larger than 0.8 indicates a large effect, 0.5 - 0.8 a medium effect and 0.2 - 0.5 a small effect (Cohen, 1988).

Results

The perceived benefits to exercise according to EBBS and percentages to each question in the benefit sub-scale are provided in Table 1. Most students agreed

with the statements reflecting benefits that are associated with participation in regular exercise.

Table 1: The exercise benefits scale: percentage for each questionnaire item

Perceived Benefit Item	Strongly disagree	Disagree	Agree	Strongly agree
Preventive Health Subscale				
I will prevent heart attacks by exercising	2.8	9.7	46.8	40.7
Exercising will keep me from having high blood pressure	4.3	8.9	48.9	37.9
I will live longer if I exercise	5.4	11.7	38.1	44.8
Physical Performance Subscale				
Exercise increases my muscle strength	1.5	11.9	49.4	37.2
Exercising increases my level of physical fitness	2.4	5.8	42.2	49.6
My muscle tone is improved with exercise	3.5	13.2	60.6	22.7
Exercising improves functioning of my cardiovascular system	3.2	11.7	62.8	22.3
Exercise increases my stamina	3.2	9.1	50.4	37.2
Exercise improves my flexibility	1.9	4.5	47.8	45.7
My physical endurance is improved by exercising	0.9	12.1	63.4	23.6
Exercise improves the way my body looks	1.9	7.4	39.0	51.7
Psychological Outlook Subscale				
I enjoy exercise	2.4	10.0	61.7	26.0
Exercise decreases feelings of stress and tension for me	1.9	8.9	48.1	41.1
Exercise improves my mental health	1.9	7.4	48.3	42.4
Exercise gives me a sense of personal accomplishment	1.7	12.8	61.5	24.0
Exercising makes me feel relaxed	3.7	13.6	53.2	29.4
I have improved feelings of well-being from exercise	3.7	10.4	60.2	25.8
Life Enhancement Subscale				
My disposition is improved by exercise	5.6	26.4	59.5	8.4
Exercising helps me sleep better at night	3.7	11.5	47.2	37.7
Exercise helps me decrease fatigue	4.8	21.9	56.5	16.9
Exercising improves my self-concept	1.7	10.4	67.7	20.1
Exercising increases my mental alertness	3.7	13.0	57.1	26.2
Exercise allows me to carry out normal activities without becoming tired	2.2	13.9	51.7	32.3
Exercise improves the quality of my work	5.0	17.7	55.4	21.9
Exercise improves overall body functioning for me	1.9	6.9	60.6	30.5
Social Interaction Subscale				
Exercising lets me have contract with friends and persons I enjoy	11.3	25.3	41.1	22.3
Exercising is a good way for me to meet new people	11.3	22.1	45.2	21.4
Exercise is good entertainment for me	5.8	17.5	46.3	30.3
Exercising increases my acceptance by others	13.2	35.1	40.7	11.0

In particular, the students strongly agreed with the following statements: 'exercising increases my level of physical fitness', 'exercise improved the way my body looks' and 'I will live longer if I exercise'.

Although most of the students either agreed or strongly agreed with the statements classified under the social interaction subscale, approximately 23% and 48% either strongly disagreed or disagreed with the statements. Specifically, 48.3% of the students did not perceive that 'exercising increased their acceptance by others' as a benefit.

The perceived barriers to exercise according to EBBS and responses to each question expressed as a percentage in the barrier sub-scale are provided in Table 2. Most students disagreed with the statements that reflected barriers that are associated with participation in regular exercise. Specifically, the students strongly disagreed with the statements: 'I am embarrassed to exercise', 'it cost too much money to exercise' and 'my family members do not encourage me to exercise'. These were not viewed as barriers that hinder them in their exercise participation.

Table 2: The exercise barriers scale: percentage for each questionnaire item.

Perceived Barriers Item	Strongly disagree	Disagree	Agree	Strongly agree
Physical Exertion Subscale				
Exercise tires me	10.4	38.3	38.1	13.2
I am fatigued by exercise	14.3	47.4	34.6	3.7
Exercise is hard work for me	31.0	43.5	18.2	7.4
Exercise Milieu Subscale				
Places for me to exercise are too far away	20.3	45.7	20.1	13.9
I am too embarrassed to exercise	61.3	32.3	4.3	2.2
It costs too much money to exercise	50.2	35.3	9.7	4.8
Exercise facilities do not have convenient schedules for me	12.6	51.3	32.3	3.9
I think people in exercise clothes look funny	33.3	38.7	19.3	8.7
There are too few places for me to exercise	13.9	32.9	38.3	14.9
Time Expenditure Subscale				
Exercising takes too much of my time	22.5	58.9	12.1	6.5
Exercise takes too much time from family relationships	33.5	50.2	10.8	5.4
Exercise takes too much time from my family responsibility	31.8	52.2	10.8	5.2
Family Discouragement Subscale				
My spouse (or significant other) does not encourage exercising	37.2	42.2	16.0	4.5
My family members do not encourage me to exercise	40.9	35.1	15.2	8.9

The overall disagreements of students with the statements in the barrier scale indicate that there are very few barriers to participation in exercise for the

students. “There are too few places for me to exercise” was perceived as a barrier that hinders most students (38.3%) in participating in exercise.

The greatest perceived benefits from exercise was preventative health (mean=3.23) and physical performance (mean=3.22), followed by psychological outlook, life enhancement and social interaction (Table 3). Preventative health and physical performance was rated significantly higher than life enhancement and social interaction. Physical performance was also rated significantly higher than psychological outlook. However, life enhancement and social interaction were rated significantly lower than the other benefits subscales. The average mean for preventative health, physical performance, psychological outlook and life enhancement was greater than 3, which suggests that the students agreed with the statements in the benefits subscales.

The barrier with the strongest inhibiting effect to physical exercise participation is physical exertion, followed by exercise milieu, time expenditure and family discouragement. Physical exertion was rated significantly higher than the other barriers listed in Table 3. Exercise milieu was also rated higher than time expenditure and family discouragement. No significant difference was found between time expenditure and family discouragement. The average mean for the four barriers was approximately 2, which indicate that the students disagreed with the statements in the subscales implying that the students do not perceive physical exertion, exercise milieu, time expenditure and family discouragement as barriers that hinder their participation in exercise.

Table 3: Descriptive statistics for the perceived benefits and barriers sub-scale

	Mean (SD)	Sub-scale				
		1	2	3	4	5
Benefits subscale						
1. Preventative health	3.23 (0.55)	-	1.000	0.108	0.000*	0.000*
2. Physical performance	3.22 (0.43)		-	0.013*	0.000*	0.000*
3. Psychological outlook	3.16 (0.44)			-	0.000*	0.000*
4. Life enhancement	3.02 (0.39)				-	0.000*
5. Social interaction	2.76 (0.62)					-
Barriers sub-scale						
1. Physical exertion	2.28 (0.56)	-	0.000*	0.000*	0.000*	
2. Exercise milieu	2.05 (0.46)		-	0.000*	0.000*	
3. Time expenditure	1.93 (0.60)			-	1.000	
4. Family discouragement	1.90 (0.70)				-	

* Significant at $p \leq 0.05$

A comparison of the means (Table 4) across the first year students for each perceived benefit to exercise activities revealed that both female and male students agreed that preventative health, physical performance, psychological outlook and life enhancement are benefits associated with participation in exercise. If the mean for the social interaction benefit is rounded numerically, the mean will be 3, indicating that students agreed that social interaction is a benefit

to participation in exercise. The mean of the responses for male students were slightly higher for all the benefits, except for preventative health. A statistical significant difference was found between male and female students for the physical performance benefit, indicating that male students perceived physical performance more important than female students. No statistical significant difference was found for the preventative health, psychological outlook, life enhancement and social interaction benefit, indicating that female and male students share similar views. The Cohen's D value was less than 0.2 indicating that no practical effect was found for the physical performance benefit or any other benefit in Table 4.

Table 4: Descriptive statistics, statistical and practical significance of the perceived benefits of exercise

		Preventative health	Physical performance	Psychological outlook	Life enhancement	Social interaction
Mean (SD)	Female students	3.25 (0.54)	3.16 (0.43)	3.15 (0.44)	3.01 (0.37)	2.71 (0.59)
	Male students	3.20 (0.56)	3.31 (0.42)	3.17 (0.44)	3.03 (0.41)	2.82 (0.65)
t-test	t value	0.927	3.705	0.312	0.372	1.917
	Significance	0.354	0.000*	0.755	0.710	0.056
Practical effect	Cohen's D	0.002	0.029	0.000	0.000	0.008
	Effect	None	None	None	None	None

* Significant at $p \leq 0.05$

A comparison of the means (Table 5) across the first year students for each perceived barrier to exercise activities revealed that both female and male students disagreed that physical exertion, exercise milieu, time expenditure and family discouragement are barriers associated with participation in exercise.

Table 5: Descriptive statistics, statistical and practical significance of the perceived barriers to exercise

		Physical exertion	Exercise milieu	Time expenditure	Family discouragement
Mean (SD)	Female students	2.26 (0.54)	2.01 (0.45)	1.97 (0.63)	1.94 (0.712)
	Male students	2.29 (0.58)	2.10 (0.47)	1.91 (0.57)	1.87 (0.70)
t-test	t value	-0.513	2.107	1.109	1.033
	Significance	0.608	0.036*	0.268	0.302
Practical effect	Cohen's D	0.001	0.010	0.003	0.002
	Effect	None	None	None	None

* Significant at $p \leq 0.05$

The mean responses for male students were slightly higher for physical exertion and exercise milieu barrier, whereas the mean responses for female students were higher for time expenditure and family discouragement barrier. A statistical significant difference was found between male and female students for the exercise milieu barrier, indicating that male students disagreed more towards the barrier than female students. No statistical significant difference was found for

the other barriers listed in Table 5, indicating that male and female students share similar views. The Cohen's D value is less than 0.2 indicating that no practical effect was found for the physical exertion, exercise milieu, time expenditure and family discouragement barrier.

Discussion

In contrast to findings in previous studies (e.g. Allison, Dwyer, Goldenberg, Fein, Yoshida Boutilier, 2005; Gyurcsik, Bray & Brittain, 2004; Grubbs & Carter, 2002) which reported that lack of time was the greatest barrier to participation in physical exercise, the current study identified the lack of facilities or infrastructure and tiredness as constraining factors. Being first year students and the fact that most of these students may be living in areas away from their home environment; the possibility exists that they may not have fully acclimatised to their new environment. They thus perceive that there is a lack of facilities at which they can exercise. With regard to the tiredness that they experience, it should be acknowledged that these students are fresh from the school environment where they were literally 'spoon fed'. The new environment that they find themselves in is much more demanding in that they are expected to work independently as well as accustom themselves to a new environment. It may also be possible that the cultural background from which these students come could have an influence on their participation in physical exercise (Lovell et al., 2010). If the norm, according to the student's background was not to exercise, this would impact on his/her attitude towards participation which would ultimately influence his/her fitness levels. This may also be related to the responsibility that students have towards maintaining a healthy lifestyle. Lee and Yuen Loke (2005) found that students had a limited sense of health responsibility and relatively few engaged in physical activity and practised nutritional habits.

The strongest perceived benefits for students were related to improved health and physical performance, enhanced psychological outlook and life enhancement. This finding echo Dreyer, Strydom and Malan's (1988) finding that participating in physical activity and a healthy lifestyle are considered to be the most important factors in maintaining optimal health. The benefit of exercise on the psychological outlook of students, indicate that student participate in exercise because it is fun, reduce their stress levels and improve their mental well-being. This is consistent with studies by Nolan and Surujlal (2009, 2010). It is also supported by Alla, Olubayo-Fatiregun and Adeniran (2007) that exercise diverts one's mind from stress, provides one with a positive outlook on life and impacts positively on work-related stress.

A surprising finding was that social interaction scored lowly as a benefit, while it is understandable taking into account the context in which the student is

functioning. Being in the first year of study in a totally new environment the student is still finding his/her feet and may therefore not focus on social interaction. One may, however, argue that being in a new environment students would more than likely attempt to make new friends and socialise. Huddleston, Mertesdorf and Araki (2002) highlighted the strong social interaction benefits associated with participation in physical exercise. In addition, the World Health Organisation posits that engaging in physical activities give young people opportunities to have social interaction and integration as well as for learning the spirit of solidarity and fair play, among others (WHO, 2002).

Conclusion

Participation in physical exercise poses many benefits and if a student engages in an exercise that he/she enjoys a healthy life. This study found that, amongst first years students, benefits regarding participation in exercise prevail over barriers experience in participation in exercise activities. First year students recognise the benefits of participating in exercises and face barriers that hinders them in their participation in physical exercise. To help students face the barriers, they need to understand the barriers and apply creative strategies to overcome them and this could help students to make physical exercise part of their daily lives. Universities are ideal settings, because they are transitional periods that offer good conditions for the acquisitions of healthy lifestyles.

References

- Alla, J.B., Olubayo-Fatiregun, M.A. & Adeniran, S.A. (2007). Leisure: An escape route from work-related stress among lecturers, bankers and hospital workers in Ile-Ife Metropolis, Nigeria. *African Journal for Physical, Health Education, Recreation and Dance*, 13(1), 91-102.
- Allison, K.R., Dwyer, J.M., Goldenberg, E., Fein, A., Yoshida, K.K. & Boutilier, M. (2005). Male adolescents' reasons for participating in physical activity, barriers to participation, and suggestions for increasing participation. *Adolescence*, 40, 155-170.
- Allison, K.R., Dwyer, J.J.M. & Makin, S. (1999). Perceived barriers to physical activity among high school students. *Preventive Medicine*, 28, 608-615.
- Arora, R., Stoner, C. & Arora, A. (2006). Using framing and credibility to incorporate exercise and fitness in individuals' lifestyle. *Journal of Consumer Marketing*, 23(4), 199-207.
- Blomstrand, A., Björkelund, C., Arai, N., Lissner, L. & Bengtsson, C. (2009). Effects of leisure-time physical activity on well-being women: A 32-year perspective. *Scandinavian Journal of Public Health*, 37, 706-712.
- Burke, E. & McCarthy, B. (2011). The lifestyle behaviours and beliefs of undergraduate student nurses: A descriptive study. *Health Education*, 111(3), 230-246.
- Churchill G.A. (2001). *Basic Marketing Research*. Orlando: Harcourt.

Cohen, J.W. (1988). *Statistical Analysis for the Behavioural Science* (2nd ed.). Hillside, NJ: Lawrence Erlbaum Associates.

Cokerill, I.M. (1995). Self-esteem development through participation in physical activity. *Employee Counselling Today*, 7(7), 14-17.

Daskapan, A., Tuzun, E.H. & Ekel, L. (2006). Perceived barriers to physical activity in University students. *Journal of Sports Science and Medicine*, 5, 615-620.

Dreyer, L.I., Strydom, G.L. & Malan, D.D.J. (1988). Die fisieke aktiwiteitsprofiel en fisieke werkvermoë van uitvoerende amptenare in enkele geselekteerde Suid-Afrikaanse maatskappye. *South African Journal for Research in Sport, Physical Education and Recreation*, 11(2), 9-20.

Dubbert, P.M. (2002). Physical activity and exercise: Recent advances and current challenges. *Journal of Consulting and Clinical Psychology*, 70(3), 526-536.

Grubbs, L. & Carter, J. (2002). The relationship of perceived benefits and barriers to reported exercise behaviors. *Family & Community Health*, 25(2), 76-84.

Gyurcsik, N.C., Bray, S.R. & Brittain, D.R. (2004) Coping with barriers to vigorous physical activity during transition to university. *Family and Community Health*, 27(2), 130-142.

Hassmen, P., Koivula, N. & Uutela, A. (2000). Physical exercise and psychological well-being: A population study in Finland. *Preventive Medicine*, 30, 17-25.

Henderson, K.A. & Ainsworth, B.E. (2003). A synthesis of perceptions about physical activity among older African and American Indian women. *American Journal of Public Health*, 93(2), 313-317.

Higgins, S.J.W., Lauzon, L.L., Yew, A.C., Bratseth, C.D. & McLeod, N. (2010). Wellness 101: Health education for the university student. *Health Education*, 110(4), 309-327.

Huddleston, S., Mertesdorf, J. & Araki, K. (2002). Physical activity behaviour and attitudes toward involvement among physical education, health and leisure services pre-professionals. *College Student Journal*, 36, 555-573.

Lee, R.L.T. & Yuen Loke, A.J.T. (2005). Health-promoting behaviors and psychosocial well-being of University students in Hong Kong. *Public Health Nursing*, 22(3), 209-220.

Lopez, M.G., Gallegos, A.G. & Extremera, A.B. (2010). Perceived barriers by university students in the practice of physical activities. *Journal of Sports Sciences and Medicine*, 9, 374-381.

Lovell, G.P., El Ansari, W. & Parker, J.K. (2010). Perceived exercise benefits and barriers of non-exercising female university students in the United Kingdom. *International Journal of Environmental Research and Public Health*, 7, 784-798.

Nolan, V.T. & Surujlal, J. (2009). Assessment of working women's perception and pursuit of recreation. *African Journal for Physical, Health Education, Recreation and Dance*, Supplement (September), 1-15.

Nolan, V.T. & Surujlal, J. (2010). Participation in physical activity: An empirical study of working women's perception. *African Journal for Physical, Health Education, Recreation and Dance*, 16(3), 355-372.

Nunnally, J.C. (1978). *Psychometric Theory* (2nd ed.) New York: McGraw-Hill.

O'Dea, J. (2003). Why do kids eat healthful food? Perceived benefits of and barriers to healthful eating and physical activity among children and adolescents. *Journal of the American Dietetic Association*, 103(40), 497-501.

Patton, M.Q. (2002). *Qualitative Research and Evaluation Methods* (3rd ed.). Thousand Oaks, CA: Sage.

Reichert, F.F., Barros, A.J.D., Domingues, M.R. & Hallal, P.C. (2007). The role of perceived personal barriers to engagement in leisure-time physical activity. *American Journal of Public Health*, 97(3), 515-519.

Salmon, P. (2001). Effects of physical exercise on anxiety, depression, and sensitivity to stress: a unifying theory. *Clinical Psychology Review*, 21(1), 33-61.

Samir, N., Mahmud, S. & Khuwaja, A.K. (2011). Prevalence of physical inactivity and barriers to physical activity among obese attendants at a community health-care center in Karachi, Pakistan. *BMC Research Notes*, 4(1), 174.

Schutzer, K.A. & Graves, B.S. (2004). Barriers and motivations to exercise in older adults. *Preventive Medicine*, 39, 1056-1061.

Sechrist, K.R., Walker, S.N. & Pender, N.J. (1987). Development and psychometric evaluation of the exercise benefits/barriers scale. *Research in Nursing and Health*, 10(6), 357-365.

Slattery, M.L., Edwards, S.L., Khe-ni, M.M., Friedman, G.D. & Potter, J.D. (1997). Physical activity and colon cancer: A public health perspective. *Annals of Epidemiology*, 7(2), 137-145.

Steptoe, A., Wardle, J., Cui, W., Bellisle, F., Zotti, A., Baranyai, R. & Sanderman, R. (2002). Trends in smoking, diet, physical exercise and attitudes towards health in European University students from 13 countries, 1990 – 2000. *Preventative Medicine*, 35(2), 97-104.

Stubbe, J.H., De Moor, M.H.M., Boomstra, D.I. & De Geus, E.J.C. (2007). The association between exercise participation and well-being: A co-twin study. *Preventive Medicine*, 44, 148-152.

World Health Organisation (2002). Physical Activity and Youth: “ Move for Health”: World Health Day 2002. [Online]: Available. http://www.who.int/archives/world-health-day/fact_sheets2.en.shtml. Accessed on 2009/02/21.

Copyright of African Journal for Physical, Health Education, Recreation & Dance is the property of African Journal for Physical, Health Education, Recreation & Dance and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.