

## Perceived Benefits of and Barriers to Exercise Participation among Secondary School Students

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### Abstract

The benefits of participating in physical exercise are numerous and well documented in the literature. Research evidence suggests that adolescents are becoming more obese and more sedentary because of their lack of participation in physical exercise. The purpose of this study was to identify and rank perceived benefits and barriers associated with participation in physical exercise among secondary school students. It also sought to investigate whether any differences exist between males and females regarding physical activity participation. Data were collected from 251 (120 males and 131 females) students attending three public secondary schools in the Hlanganani rural area of Limpopo province, South Africa. Frequencies were used to report on the demographic data and means were used to rank the benefits and barriers associated with participation in physical exercise. The results of the study indicated that the most likely reasons to exercise were to feel less anxious, less depressed, less stressed and to lose weight. On the other hand, lack of time due to children, hair maintenance issues, self-consciousness about body or physical appearance, use of drugs and/or alcohol and the lack of proper equipment or access to exercise facilities were identified as major barriers to physical exercise. The results of this study have practical implications for promoting physical activity in rural schools. However, it is recommended that the Department of Education, in collaboration with the Department of Sport and Recreation, should provide schools with sport facilities and equipment for the successful implementation of physical exercise programmes.

**Keywords:** Perceived, benefits, barriers, exercise, secondary school

### 1. Introduction

There is fairly consistent evidence that suggests that adolescents are becoming more obese and more sedentary because of their lack of participation in physical exercise. The benefits of participating in physical exercise are numerous and well documented in the literature. Dubbert (2002) highlighted that physical exercise participation reduces obesity, maintains healthy joints, controls pain, builds stronger bone mass as well as improve endurance, strength and balance. Furthermore, physical exercise improves the functioning of the heart and the ability of the cardio respiratory system to carry oxygen to blood vessels and also improves metabolism - the process by which food is converted to energy and tissue is built (Insel & Roth, 2006). According to Insel and Roth (2006), being physically fit makes it easier to do everyday tasks. Regular physical exercise provides reserve strength for emergencies and helps people to look and feel good. In the long term, physically fit individuals are less likely to develop heart disease, cancer, high blood pressure, diabetes, and many other degenerative diseases (Insel & Roth, 2006). Lopez, Gallegos and Extremera (2010) posit that regular participation in physical exercise provides increased physical, psychological and physiological benefits.

Regular exercise is also associated with an improved sense of well-being and mental health (Weinberg & Gould, 2011). It positively affects young people's social development and prosocial behaviour. Research has shown that regular exercise increases energy levels, improves emotional and psychological well-being, and boosts the immune system (Insel & Roth, 2006). According to Talbot (2001), physical exercise helps one to develop respect for one's body as well as that of others. This contributes to an integrated development of mind and body as well as an understanding of the important role that physical exercise plays in one's life. O'Dea (2003) reported that the social benefits associated with participation in physical exercise include fun and enjoyment, interacting with others and developing life skills.

Exercise improves muscle strength, academic performance, releases tension and improves their appearance and

self-esteem (O'Dea, 2003). Exercise also helps students to cope with stress, improves their sense of relaxation, and reduces aggression, frustration and anger (Dhurup, 2012). Hassmen, Koivula and Uutela (2000) found that active participation in physical exercise results in lower depression, anger, cynical distrust, and stress. The authors 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 as well as higher levels of coherence than those who do not exercise. Another study by Stubbe, De Moor, Boomstra and De Geus (2007) reported that exercisers are more satisfied with their lives and are happier than non-exercisers. However, despite the benefits of physical exercise, many people still choose not to exercise, usually citing time constraints, lack of motivation, inadequate sport facilities and equipment, lack of energy, lack of self-discipline, discomfort, cost, lack of family and friends' support, illness and injury as major barriers to participation in physical exercise (Allison, Dwyer & Makin, 1999; Canadian Fitness and Lifestyle Research Institute, 1996; Weinberg & Gould, 2011). Although there is overwhelming replete information on perceived barriers to and benefits of exercise among university students (Dhurup, 2012; Nolan, Sandada & Surujlal, 2011; Tumusiime, & Frantz, 2006); very little is known about barriers to and benefits of exercise among secondary school students, in particular. Therefore, it is vitally important to conduct a study among students in secondary schools in order to contribute to the body of knowledge on benefits of and barriers to exercise.

## **2. Problem Statement**

Schools are an ideal setting and well positioned to inculcate values associated with a healthy lifestyle. They have resources such as facilities and teachers to help develop an understanding and awareness of the significance of physical exercise so that it can be carried through to their adult life (Cone, 2004; Tappe & Burgeson, 2004). Physical education teachers are supposedly the vehicle through which participation in physical exercise is promoted (Surujlal Shaw & Shaw, 2007). Van Deventer (2002) lamented the downscaling of physical education and the resultant decline in extra-curricular sport activities in South African schools, which contributed greatly to students diverting their attention to other activities.

Several studies have revealed the decline of physical activity in schools. For example, Toriola, Amusa, Patriksson & Kougioumtzis (2010) argued that the increasing trend of physical inactivity among children is as a result of their exposure to modern technological devices such as television, computer games, video games, mobile phones, Internet, access to fast foods rich in saturated fats, and the fact that children are often driven to school nowadays as opposed to walking or cycling. Very few studies have been conducted to identify secondary school students' perceived benefits and barriers to physical exercise participation. This is a surprising finding, considering the many positive benefits associated with participation in physical exercise. This study attempts to fill the void in research.

## **3. Purpose of the Study**

The purpose of this study was to identify and rank perceived benefits and barriers associated with participation in physical exercise among secondary school students. It also sought to investigate whether any differences exist between males and females regarding physical activity participation.

## **4. Methodology**

### *4.1 Design*

An extensive literature study was conducted on physical exercise participation of secondary school students with a particular focus on the benefits and barriers. A quantitative empirical design was used for the research. According to Malhotra (2004), a quantitative approach allows for data collection from a large number of participants in a structured manner.

### *4.2 Sample*

The sample for the study was secondary school students. A non-probability convenience sampling technique was used to recruit the study sample. Randomness was ensured by administering the questionnaire at three different secondary schools. Students attending three public secondary schools in Hlanganani rural area of Limpopo province of South Africa were requested to participate in the study.

### 4.3 Research Instrument and Procedure

A two-section questionnaire was developed for the study. Section A of the questionnaire requested demographic information of the participants. In Section B, the questionnaire developed by Peltzer and Pengpid (2006) was used to identify the benefits and barriers associated with physical exercise participation of secondary school students. The questionnaire comprised two sub-scales measuring benefits of and barriers to participation in physical exercise. The benefits exercise scale comprised seven closed-ended items, which were scored on a five-point Likert scale ranging from one (strongly agree) to five (strongly disagree), and the barriers exercise scale comprised 10 closed-ended items, which were also scored on a five-point Likert scale ranging from one (always) to five (never). A Cronbach alpha of 0.593 and 0.746 were obtained for benefits of, and barriers to exercise scale, respectively.

The principal researcher personally supervised the administration of the questionnaire. Schoolteachers, who were trained as fieldworkers, administered the questionnaire at their respective schools during the lunch breaks and immediately after school.

### 4.4 Ethical Considerations

Permission was been obtained from the Department of Education at Vhembe district, Thohoyandou and Hlanganani circuit office at Hlanganani rural area, Limpopo province (Number: 14/7/R) to conduct the research in schools. In addition, permission to administer the questionnaire at each school was sought from the principals of those schools involved in the study. Participants were informed that their participation was voluntary and they could withdraw from the study at any time without repercussions. A covering letter was used to inform participants of anonymity and confidentiality.

### 4.5 Data Analysis

The Statistical Package for Social Sciences (SPSS – Version 21) was used to analyse the data. The data were analysed in the following ways, descriptive statistics were used to report on the demographic characteristics of the sample, and mean ranking was used to summarise the benefits and barriers associated with physical activity participation. T-tests were used to examine the differences between male and female participants.

## 5. Results

### 5.1 Demographics

Of the 256 questionnaires administered, 251 (98 %) completed questionnaires were returned, with 120 (48 %) male respondents and 131 (52 %) female respondents. The age of the respondents ranged from 16-23 years, with the highest represented group (57 %) being in the 16-18 years age group, followed by 19-21 years (37 %) and 22-23 years (6 %).

### 5.2 Benefits of Physical Exercise Participation among Secondary School Students

Table 1 summarises the benefits of physical exercise participation among secondary school students. In terms of mean ranking, the most likely reasons to exercise were to feel less anxious, less depressed, less stressed and to lose weight. In terms of gender, males indicated that the greatest benefits of exercise were to feel less anxious, less depressed, to lose weight and feel less stressed, whereas among females the most important benefits of exercise were to feel less anxious, less depressed, less stressed and to meet new people. A t-test was used to examine the differences between males and females and yielded a significant difference regarding the following variable: "Exercise will help me lose weight" ( $t = 4.376$ ,  $p < 0.05$ ). Overall, psychological benefits of exercise were rated significantly higher than health and social benefits.

**Table 1:** Benefits of physical exercise participation among secondary school students

Variable	Males	Females	All	t-value
	M SD	M SD	M SD	
<b>Health and social benefits subscale:</b>				
Exercise will help me meet new people	1.98 1.43	1.76 1.22	1.88 1.35	1.325
Exercise will help me lose weight	2.32 1.61	1.56 1.04	1.92 1.40	4.376*
Exercise will help me feel more energetic	1.74 1.20	1.58 1.05	1.64 1.12	1.122
Exercise will help me feel stronger and healthier	1.54 1.06	1.43 .94	1.47 .99	.879
<b>Psychological benefits subscale:</b>				
Exercise will help me feel less stressed	2.23 1.39	2.12 1.39	2.17 1.39	.599
Exercise will help me feel less anxious	2.71 1.58	2.95 1.66	2.84 1.63	-1.188
Exercise will help me feel less depressed	2.43 1.54	2.60 1.67	2.53 1.62	-.846

### 5.3 Barriers Associated with Physical Exercise Participation among Secondary School Students

Table 2 provides the results regarding the barriers to physical exercise participation among secondary school students. Lack of time due to children, hair maintenance issues, and self-consciousness about body or physical appearance, use of drugs and/or alcohol and lack of proper equipment or access to exercise facilities were identified as major barriers to physical exercise participation among secondary school students. In terms of gender, males reported lack of time due to children, hair maintenance issues, self-conscious about body or physical appearance, lack of energy and use of drugs and/or alcohol as major barriers to physical exercise, whereas females perceived lack of time due to children, hair maintenance issues, use of drugs and/or alcohol, unfavourable weather and lack of energy as major barriers to physical exercise participation. No significant ( $p > 0.05$ ) differences were noted between mean values for males and females with regard to barriers to physical exercise. However, overall, the greatest barriers to exercise were body image and time effort, followed by lack of motivation and facilities as specific factors.

**Table 2:** Barriers to physical exercise participation among secondary school students

Variable	Males	Females	All	t-value
	M SD	M SD	M SD	
<b>Specific subscale:</b>				
Use of drugs and/or alcohol				
Health condition (e.g., illness, injury)	4.00 1.62	3.94 1.69	3.94 1.67	.290
Unfavourable weather (e.g., cold, rain, heat/humidity)	3.58 1.73	3.47 1.83	3.53 1.78	.492
<b>Body image subscale:</b>				
Self-conscious about body or physical appearance	3.66 1.63	3.93 1.47	3.81 1.55	-1.351
Hair maintenance issues	4.10 1.49	3.92 1.61	4.01 1.56	.870
<b>Lack of motivation and facilities subscale:</b>				
Lack of proper equipment or access to exercise facility	4.22 1.45	4.19 1.45	4.20 1.45	.117
Lack of energy	3.59 1.70	3.64 1.69	3.63 1.69	-.264
Lack of interest in exercise	4.02 1.51	3.91 1.53	3.96 1.52	.563
<b>Time effort</b>	3.53 1.67	3.91 1.57	3.73 1.63	-1.868
Lack of time due to household responsibilities	3.89 1.53	3.81 1.51	3.85 1.52	.407
Lack of time due to children	4.25 1.44	4.46 1.19	4.35 1.33	-1.281

## 6. Discussion

The purpose of this study was to examine the perceived benefits of and barriers to physical exercise among secondary school students. To meet new people and lose weight were the most important health and social benefits, whereas to feel less anxious and less depressed were the most important psychological benefits for both females and males. These findings concur with the results of previous studies which found that participation in physical exercise reduces body weight, reduces depression and anxiety, gives young people opportunities to meet new people and have social interaction with others (Hassmen et al., 2000; Nolan et al., 2012; Tergerson & King, 2002; WHO, 2002). Furthermore, Biddle, Fox and Boutcher (2000), who revealed that students who exercised regularly had reduced stress-related disorders and reduced depression, also highlight the benefits of physical exercise participation.

Lack of time due to children was found as a major barrier among students, and in particular females. It is well observed that in rural areas, females play a large part in family responsibilities (Kubayi, Goon, Coopoo & Amusa, 2013). Moreover, whereas females are assigned tasks such as cooking, helping their siblings with homework, and sweeping the yard, males are expected to perform activities such as herding cattle and gardening, thus giving them little time to participate in sport and/or physical activity.

Another important finding, which emerged from this study, is that hair maintenance issues were perceived as another major barrier to physical exercise. This finding echoes those of Railey (2000) who commented that due to hair practices people opt to avoid exercise and its associated sweating, which thereby negates their investment until after a period of time passes pending other more highly prioritised activities.

Self-consciousness about one's body or physical appearance was also cited as a major barrier. Alternatively, it is possible that greater levels of physical activity, which often occur in public venues or settings, lead to increased awareness that others may be noticing one's appearance or, in the case of the discouragement variable, incite more criticism from others related to choosing to spend time exercising (King, Castro, Wilcox, Eyler, Sallis & Brownson, 2000). The present finding in which more females reported lack of proper equipment or access to exercise facilities is consistent with those of previous research by Surujal et al., (2007) who reported in their study that grade 10 learners expressed their dissatisfaction with availability of facilities for participating in physical activity.

## 7. Conclusion

This study found that the most likely reasons to exercise were to feel less anxious, less depressed, less stressed, and to lose weight. On the other hand, lack of time due to children, hair maintenance issues, and self-consciousness about body or physical appearance, use of drugs and/or alcohol and lack of proper equipment or access to exercise facilities were identified as major barriers to physical exercise participation among secondary school students. These findings have practical implications for secondary school students' future participation in physical exercise. Educators in secondary schools can use the positive findings to motivate students to continue participating in physical exercise. Furthermore, they should develop strategies to help students overcome the barriers that prevent them from participating in physical education. The Department of Education, in collaboration with the Department of Sport and Recreation, have an important role in providing schools with proper sport facilities and equipment for the successful implementation of physical exercise programmes.

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