

Cross Sectional Study; Identifying Physical Activity Barriers Amongst Teenagers Who Are Obese/Over Weight by Appearance in Islamia College for Boys and Jinnah College for Women Peshawar

ANAM AMIN¹, GHAZI FARMAN², AALIA AMJAD³, AWAIS AHMAD⁴, SHAHMIR ARIF⁵, MASHAL JAMIL⁶

¹⁻⁶MBBS Students, Rehman Medical College, Peshawar KP, Pakistan

Corresponding author: Anam Amin, Email: annamkhalik@yahoo.com

ABSTRACT

Background: Physical activity is defined as any bodily movement that requires the use of energy, where it is recommended, that teenagers get 60 minutes of moderate to severe physical activity. However, almost majority of the teenagers around the globe are getting inadequate physical activity.

Objectives:

- To analyze social, cultural and religious factors that affect physical activity.
- To identify different personal factors such as body image, self esteem and their effects on physical activity.
- To identify ecological and academic factors leading to decrease physical activity and its associated comorbidities.
- To identify the role of government in evaluating the availability of sports centres and other facilities for adolescents /teenagers.

Study Design: A cross sectional study

Place and Duration: Conducted Jinnah College Peshawar and Islamia College Peshawar, during from the period March 2018 to May 2018.

Methodology: Sample under study was based on teenage students (16 to 19 years) with a total size of 150 students that were part of bachelor program (BS Botany), who were obese or over-weight by appearance. The students were given standardized questionnaires randomly, regardless of gender. Collected data obtained from questionnaire were analyzed.

Results: According to the results, 94.41% students had barriers to physical activities while 5.68% had none. 75 students (50%) said that they did not have any previous bad experiences with their appearance while 30 students (21.7%) said that they did. More-over, 59 students (39.3%) said that their reduced activity was due to lack of time while 55 students (36.7%) felt that the lack of safe places was the causative factor. 60 students (40%) students felt that they needed a partner while 57 students (38%) just felt demotivated.

Conclusion: On the basis of this study, we conclude that majority of the students have various barriers regarding their physical activities. 94.31% of the students reportedly have barriers while 5.69% had no barrier whatsoever, and they were well aware of the consequences such as obesity, diabetes etc.

Keywords: Physical activity, Barriers, Over-weight, Obese.

INTRODUCTION

Physical exercise, as defined by the World Health Organization (WHO), is any movement of the body generated by skeletal muscle that causes the body to burn energy. The WHO recommends 60 minutes of moderate or vigorous-intensity physical activity per day for adolescents aged 11 to 17. Loss of physical activity is a major contributor to obesity and other chronic conditions such as diabetes, arthritis, and heart disease. With 3.2 million fatalities annually, it is the fourth biggest cause of death globally. Eighty percent of teenagers worldwide are not physically active enough, and of those, 84 percent of females and 78 percent of boys fall into this category (1).

Religious, social, cultural, and economic considerations, as well as monetary constraints and physical impairments, all have a role in discouraging people from engaging in regular physical exercise.

body and soul, yet there are clear regional and cultural differences in how much exercise people get. Nearly twice as many people in high-income nations are not physically active as in low-income ones (2). Numerous studies reveal that South Asians in the West, while knowing the importance of exercise and its many advantages, are among the least physically active of all ethnic groups in the West (3). Some college-bound teens attribute their lack of exercise to factors like a lack of time or money or the embarrassment of working out in front of others (4), but in other cases, the lack of physical education and the facilities, indoor and outdoor, provided to students is the root cause and has led to very low physical activity from students (5).

In 2011, 88.2% of Pakistan's teenage population wasn't getting enough exercise; this included 87.3% of men and 91.1% of women (WHO). In spite of the fact that there have been previous studies on the topic of adolescents' levels of physical activity in Pakistan, none of them have been undertaken in Peshawar, nor

have they zeroed in on the factors that contribute to a decline in physical activity.

METHODOLOGY

Experimental Design: A cross-sectional study was carried out in 2 months (March-May 2018) in Jinnah College for Women and Islamia College for Boys Peshawar (both of these being government institutes).

Sample Size: The sample under study was based on teenage students (16 to 19 years) with a total size of 150 students that were part of bachelor program (BS Botany), who were obese or overweight by appearance.

Data Collection Tool: The students were given standardized questionnaires randomly, regardless of gender. Any students that did not meet the criteria or refused to participate were excluded from the research. The questionnaire was based on personal, social, academic and governmental barriers that were limiting the physical activity of the teenagers. The students were given about 30 minutes of time to complete the questionnaire and strict confidentiality was ensured.

Statistical Analysis: SPSS 16 and Microsoft Word was used for organizing the collected data obtained.

Ethical Consideration: The study was conducted in compliance with the 'Ethical principles for medical research involving human subjects' of the Helsinki Declaration. The study protocol was discussed with supervising faculty for possible ethical concerns.

RESULTS

A total of 170 questionnaires were distributed, in Jinnah College for women and Islamia College for and 150 were returned. The forms were only given to students that fit the criteria and were distributed randomly, regardless of gender.

Table 1: Self Limitations

	Range	Frequency	Percent
Previous negative experience with physical activity			
	1-3	75	50.0
	4-7	44	29.3
	8-10	31	20.7
Lack of time			
	1-3	34	22.7
	4-7	57	38.0
	8-10	59	39.3
Lack of energy			
	1-3	49	32.7
	Range	Frequency	Percent
	4-7	64	42.7
	8-10	37	24.7
Lack of motivation			
	1-3	57	38.0
	4-7	48	32.0
	8-10	45	30.0
Fear of injury			
	1-3	66	44.0
	4-7	53	35.3
	8-10	31	20.7
How i see my body			
	1-3	66	44.0
	4-7	60	40.0
	8-10	24	16.0
Failure to achieve goals in previous attempts to become active			
	1-3	61	40.7
	4-7	54	36
	8-10	34	22.7
Pain when I exercise			
	1-3	67	44.7
	4-7	49	32.7
	8-10	54	22.7

Table 1 shows that about 26 percent (39) subjects were not able to participate in any physical activity because of previous negative experience, lack of time, lack of energy, lack of motivation, fear of injury, unable to achieve their goals and pain while exercising.

Table 2: Social Barriers

	Range	Frequency	Percent
Have other areas in my life that i feel must take priority in my day			
	1-3	40	26.7
	4-7	76	50.7
	8-10	34	22.7
Lack of support from others			
	1-3	63	42.0
	4-7	55	36.7
	8-10	32	21.3
Lack of partner			
	1-3	60	40.0
	4-7	44	29.3
	8-10	46	30.7
Feeling uncomfortable			
	1-3	55	36.7
	4-7	52	34.7
	8-10	43	28.7

Above table shows that about 29 percent (43) subjects had social problems such as lack of support from others, lack of partner, feeling uncomfortable.

Table 3: Academic Barriers

	Range	Frequency	Percent
Lack of skills			
	1-3	53	35.3
	4-7	66	44.0
	8-10	31	20.7
Lack of knowledge			
	1-3	69	46.0
	4-7	59	39.3
	8-10	22	14.7
Lack of available and suitable programmes at my level			
	1-3	55	36.7
	4-7	61	40.7
	8-10	34	22.7

Table 3, about 21 percent (32) subjects had problems such as lack of skills, lack of knowledge and lack of programmes and were not able to continue their physical work.

Table 4: Governmental Barriers

	Range	Frequency	Percent
Cost of activity			
	1-3	70	46.7
	Range	Frequency	Percent
	4-7	59	39.3
	8-10	21	14.0
Lack of transportation			
	1-3	60	40.0
	4-7	55	36.7
	8-10	35	23.3
Lack of safe places			
	1-3	55	36.7
	4-7	43	28.7
	8-10	52	34.7
Lack of access to opportunities such as nearby facilities			
	1-3	51	34.0
	4-7	60	40.0
	8-10	39	26.0

Table 4 shows that there were certain governmental problems such as lack of transportation, lack of safe places, lack of opportunities etc that were not allowing the subjects to continue their exercise. 24 percent (36) subjects were affected because of these problems.

According to the results, as shown in the above tables students (50%) said that they did not have any previous bad experiences with their appearance while 30 students (21.7%) said that they did. Moreover, 59 students (39.3%) said that their reduced activity was due to lack of time while 55 students (36.7%) felt that the lack of safe places was the

causative factor. 60 students (40%) students felt that they needed a partner while 57 students (38%) just felt de-motivated.

Summed up in Figure 1.2 and Table 5 it seems as the more important causes are social and self limitations. Majority of the students felt that it was more important to give the free time that they had to either family or for their own leisure while lack of encouragement and access to facilities also played a huge part in limiting their physical activity.

Many students felt uncomfortable or scared in such an environment and also blamed not having a partner to accompany them as a major reason why their activity levels were so low.

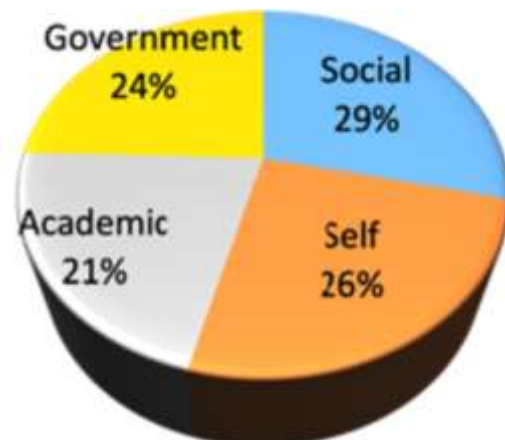


Figure 1.2

Table 5: Percentages of specific barriers

Barriers	Percentages
Social	29
Self	26
Academic	21
Government	24

DISCUSSION

Physical exercise is crucial for adolescents, since it may promote both their physical and mental health. Overweight and obesity are only two of the numerous unwelcome consequences that may result from a lack of physical activity. Obesity is known to raise the likelihood of acquiring several major health disorders, such as coronary heart disease, high blood pressure, stroke, Type 2 diabetes, cancer, sleep apnea, gall stones, osteoarthritis, and infertility or irregular periods. [1] Being overweight as a teenager increases the risk of several illnesses and makes maintaining friendships difficult, among other issues. Since physical activity has been shown to reduce the risk of developing many serious illnesses and aid in the fight against obesity, we thought it would be instructive to investigate the factors that serve as roadblocks to more regular exercise.

Our research set out to better understand what stops overweight and obese-looking youth from engaging in regular physical exercise. Further, we have discovered some noteworthy results from our investigation. Fifty percent of the students (75) had no negative experiences with their looks, whereas twenty-one percent (30) did. Furthermore, 59 students (39.3%) said that they were less active because of a lack of time, while 55 students (36.7%) blamed the absence of safe areas. Forty percent of students reported feeling lonely or isolated, and almost as many (57) reported lacking motivation.

It appears that societal and personal constraints have a bigger role. Lack of encouragement and access to facilities also had a big role in restricting students' physical exercise, as did students' prioritisation of spending their spare time with family or on their own interests. Some pupils' lack of participation may have resulted from their fear of the unknown, while others may have been inhibited since they were alone.

We believe that regular periods of physical exercise should be promoted and perhaps required in educational institutions. Inquiring While

Most students believed that there was not enough of an emphasis on sports and other forms of physical exercise, particularly for female students, by their respective educational institutions. We also think that medical and health experts should make more regular visits to universities as part of awareness campaigns regarding obesity and its repercussions in order to stress the necessity of exercise.

The high frequency of physical inactivity we observed jibes with the literature from several regions of the globe [2,3]. Recent research in Saudi Arabia showed that 40.6% of the population is physically inactive; the IPAQ was employed to measure inactivity, and the study group included both obese and non-obese people [3]. Since we only included those who were either overweight or obese, we expected to see a greater rate of inactivity.

As has been shown in earlier quantitative [4,5] and qualitative assessments [6,7], peer and family influence have a significant role in determining whether or not young people engage in physical exercise. From the time they are adolescents forward, friends seem to have an outsized impact on young people's actions. Therefore, initiatives to encourage PA should take into account friends' encouragement of PA, friends' willingness to engage in PA together, friends' perspectives on PA, and friends' willingness to engage in PA as a leisure activity. Consistent with the aforementioned research, we discovered that a large proportion of our participants avoided exercise because they lacked a workout buddy.

There are many ways in which family can help young people develop healthy physical activity habits, including setting a positive example themselves (role modelling), engaging in physical activity activities with others (socialisation), providing emotional support (encouragement, attitudes), and providing logistical support (e.g., child care, transportation) (transportation and registration).

Some research [Allison et al., 2005; Gyurcsik et al., 2004] found that young people's own self-imposed limitations were just as significant as those imposed by the outside world. Our research

has produced similar results.

Our research shows that there are significant individual and environmental barriers to PA among the obese. Findings from this study corroborate those from earlier research [8, 3, 9] in that a lack of motivation and a scarcity of time were identified as significant barriers. These outcomes jived with our own findings as well.

Strengths: We anticipate that our research will serve as a public service announcement (PSA) to inform adolescents of the value of physical exercise, and we hope it will inspire additional PSAs that target audiences other than adolescents to adopt.

This will not only help researchers understand why so many American youth and adults aren't getting enough exercise, but it will also spur them on to perform larger-scale studies to better understand the root causes of this epidemic. As a result, people will become more educated, and there will be a greater push to get people moving than ever before.

We believe our research may serve as a reference, outlining the fundamental obstacles and challenges that prevent more people from exercising for their own physical and mental health, so that individuals and authorities can begin to address the issue.

Limitations: One of the limitations of the study was that it was cross-sectional in design that prevents determining causation, our study participants may not be representative of the general population which may limit its generalisability.

Our sample size was not significant but hopefully in the future we can increase our sample size and make the study even more comprehensive.

CONCLUSION

This research shows that most students face many obstacles while trying to engage in physical activity. According to the data, 94.31% of the pupils have some kind of obstacle, while just 5.69% claim having no such issue. It is no secret that many of today's students are overweight, which may lead to a host of serious health issues like diabetes, hypertension, cardiovascular disease, arthritis, and more. The majority of students believe they face several challenges. There are several obstacles, such as those at the individual, social group, educational institution, and governmental levels. The percentage of students having these barriers is as follows:

Personal barriers: 26%

Social barriers: 29%

Academic barriers: 21% Political (government) barriers : 24%

The results of this study points to the fact that majority of the teenagers cannot access to being physically active and are more vulnerable to obesity due to their limitations or barriers.

REFERENCES

1. Physical activity [Internet]. [cited 2018 Apr 25]. Available from: <http://www.who.int/en/news-room/fact-sheets/detail/physical-activity> [1]
2. GHO | By category | Prevalence of insufficient physical activity among adults - Data byWorld Bank income groups. WHO [Internet]. [cited 2018 Apr 25]; Available from: <http://apps.who.int/gho/data/view.main.2487?lang=en> [2]
3. Lawton J, Ahmad N, Hanna L, Douglas M, Hallowell N. "I can't do any serious exercise": Barriers to physical activity amongst people of Pakistani and Indian origin with Type 2 diabetes. *Health Educ Res.* 2006;21(1):43-54. [3]
4. Kamarudin K O-FM. Attitudes toward physical activities among college students. *Vol. 22, Pakistan Journal of Psychological Research.* 2007. p. 43-54. [4]
5. Bashir A, Abro AA, Anwar S, Ali M. A STATE OF PHYSICAL EDUCATION AND SPORTS IN PAKISTAN : A CRITICAL ANALYSIS ON LACK OF INFRASTRUCTURE AND FRAMEWORKIN. 2000; [5]
6. <https://www.livescience.com/34787-obesity-high-bmi-causes-diabetes-heart-dis-ease.html> [6]
7. United State Department of Health and Human Services. *Healthy people 2010: under-standing and improving health*, Washington, DC. 2 2000.[7]
8. Al-Hazzaa HM. Health-enhancing physical activity among Saudi adults using the In-ternational Physical Activity Questionnaire (IPAQ) Public

- Health Nutr. 2007;10(suppl 1):59–64. [PubMed] [8]
9. Edwardson C, Gorely T. Parental influences on different types and intensities of physical activity in youth: a systematic review. *Psychol Sport Exerc* 2010; 11: 522–35. [9]
 10. Edwardson C, Gorely T. Parental influences on different types and intensities of physical activity in youth: a systematic review. *Psychol Sport Exerc* 2010; 11: 522–35. [10]
 11. Foster C, Cowburn G, Allender S, Pearce-Smith N. Physical Activity and Children. The Views of Children on Barriers and Facilitators to Participation in Physical Activity: A Review of Qualitative Studies. London: National Institute for Health and Clinical Excellence, Public Health Collaborating Centre, 2007. [11]
 12. Allender S, Cowburn G, Foster C. Understanding participation in sport and physical activity among children and adults: a review of qualitative studies. *Health Educ Res* 2006; 21: 826–35. [12]
 13. Sutjahjo SA, Ball K, Warren N, Inglis V, Crawford D. Perceived personal, social and environmental barriers to weight maintenance among young women: a community survey. *Int J Behav Nutr Phys Act*. 2004;1:15. doi: 10.1186/1479-5868-1-15. [PMC free article] [PubMed] [Cross Ref][13]
 14. World Health Organization. EPI INFO 6 In 6.04 ed Geneva. 2001.[14]