





SURVEY ON PARTICIPATION IN PHYSICAL ACTIVITY PROGRAM, PERCEPTIONS AND BARRIERS AMONG YOUNG FEMALES

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ABSTRACT

Aims of Study: In Pakistan, the level of physical inactivity among adults is 26%. This survey aims to determine the participation in structured physical activity among young females and their perception and barriers towards SPA.

Methodology: Purposive sampling was used to gather data from young females aged 16-30 in Karachi. Demographics, perception, and barriers were analyzed using descriptive analysis. Pearson chi-square was used to draw associations between qualitative variables.

Results: According to a study of 319 participants, more than half did not participate in structured physical activity. Those who did found it beneficial for their health and happiness. Barriers to participation included transportation and gender-specific facilities, but these were not significantly associated with participation.

Limitations & Future Implications: The study did not explore variations in physical

activity participation among different ethnic, educational, socioeconomic, or occupational groups. Future studies should investigate these factors among both genders to understand perceptions and barriers to structured physical activity across diverse populations.

Originality: To promote physical activity among young females and prevent health issues, it's crucial to recognize their understanding of SPA barriers and perceptions and develop appropriate strategies to overcome them.

Conclusion: The barriers to structured physical activity had no significant effect on participation among young females. Also, participation in structured physical activity was not affected by marital status, age, and education level.

Keywords: *Physical activity, exercise, perception, female, health, non-communicable diseases.*

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Introduction

Lack of motivation and impediments to physical activity (PA) can cause negative consequences for wellbeing among youth in the ensuing years. Physical inactivity has become a significant factor that is accountable for chronic physical and psychological disorders¹. It is the fourth leading cause of mortality in both developed and developing countries². As indicated by the WHO, there is a 20% to 30% increased risk of death in physically inactive people when contrasted with sufficiently active ones³. Substantial reduction in mortality risk by 2-4 % and 3-13% can be accomplished by performing 2-4 times the recommended amount of vigorous and moderate intensity physical activities respectively⁴. According to the Global Burden of Disease 2017 report, approximately 1.3 million deaths per year occur due to the avoidance of physical activity⁵. Globally, the health care cost attributable to physical inactivity were US dollar 145 billion per year⁶. In China and Canada, the cost is 15% and 3.7% of the total health expenditure respectively⁷.

Insufficient physical activity or sedentary behavior among individuals can be responsible for building up a reproducible disorder in any age known as disuse syndrome⁸. Cardiovascular disease has become a significant reason for death in women worldwide, with poor health outcomes as compared to men⁹.

WHO also suggested that cancer incidence due to sedentary behavior may increase up to 15 million by the year 2020¹⁰. South Asians are at high risk of developing non-communicable chronic diseases due to inadequate physical activity levels¹¹. The prevalence of physical inactivity in Pakistan is 41.5% and approximately, 80 million adults in Pakistan are suffering from non-communicable diseases as a result of sedentary lifestyle¹².

WHO recommends 150 minutes of moderate-intensity PA or 75 minutes of vigorous-intensity PA throughout a week with muscle-strengthening activities twice a week for adults aged 18 to 64 years³. Despite the evidence from much scientific literature emphasizing the benefits of physical activity, participation in physical activity programs is still low in developed and developing countries¹³. However, physical education with social support, personal motivation, and a favorable environment can promote physical activity in both genders of all ages^{14,15}. Environmental components also play a significant role in promoting or impeding physical activity in developed countries¹⁵. More than 1 in four adults are physically inactive, and this level of inactivity has been unchanged since 2001¹⁶. However, the 2018 Physical Activity Council Participation Report in the US shows that 28% of the American population is inactive, suggesting that the physical activity rate has increased in the US population¹⁷. It is additionally evaluated that there is a further decline in physical activity level among the households of low income (under \$25000 per year)¹⁷.

In adolescents, physical activity level is high with better socioeconomic status^{14,15}. Higher schooling of adolescents and guardians and active parents also encourage physical activity among adolescents^{14,15}. In developing countries, females are less engaged in physical activity than males, reflecting a negative attitude towards physical activity, and they perceived more limitations while engaging in physical activity^{14,18,19}. The prevalence of physical inactivity among females in Arabian Gulf countries is higher (73.7%) when compared to males.²⁰ The main factors constraining physical activity in females are societal and cultural factors with lack of awareness, motivation, facilities, and security^{18,19}.

As per the author's knowledge, there is limited data regarding young females' perception of participation in structured physical activity (SPA) and factors limiting their participation. Therefore, it is essential to recognize their level of understanding regarding the benefits of SPA and determine barriers so that appropriate strategies would develop to promote physical activity among young females to prevent health issues and decline the disease burden associated with sedentary behavior. The purpose of this survey is to determine the participation in structured

physical activity among young females. It also aims to determine their perception of structured physical activity and identify factors that limit their participation.

Methodology

The cross-sectional study was conducted by using nonprobability purposive sampling technique. The duration of the study was about three months (January 2019 to March 2019). The study setting was Sindh Institute of Physical Medicine and Rehabilitation, Karachi. Data was gathered through an online questionnaire from females of Karachi, in-between age 16 and 30 years without known co-morbid, were independent in daily living activities, had access to the internet, and were able to read and understand the English language. Those who were pregnant, having any physical or mental disability were excluded from the study. The sample size of 315 was ascertained utilizing OPENEPI version 3 with the hypothesized frequency of 28% (Perceived barriers and physical activity in adolescent students from a Southern Brazilian city)²¹, confidence limits of 5%, and a design effect 1%.

Data was collected using an online questionnaire sent to the participants via the Internet (WhatsApp, Facebook, Email), which consisted of 4 sections. An informed consent sheet was attached with the questionnaire with the purpose of the study mentioned. Participants who filled the consent sheet were proceeded to fill the questionnaire. The first section had demographic information (name, age, education level, occupation). The second section consisted of a close-ended question about participation. The third section consisted of self-designed questions regarding females' perceptions about physical activity programs and was analyzed using 5 points Likert scale. The third section was further divided into parts A and B. Respondents who participated in any structured physical activity-filled part A and those who did not participate filled part B. The last section consisted of questions about barriers in the physical activity program with 4 points Likert scale. The questionnaire was r for pilot testing, was filled by 9 subjects, and few changes were made.

Variables		n	%
Qualification	Matriculation	1	0.3
	Intermediate	23	7.2
	Undergraduate	226	70.8
	Postgraduate	60	18.8
	Other	9	2.8
Occupation	Student	185	58.0
	Professional	97	30.4
	Others	37	11.6
Marital status	Unmarried	292	91.5
	Married	24	7.5
	Others	3	0.9

Table 1: Description of study participants (n=319)

392 responses were gathered, out of which 73 were excluded during screening. IBM software SPSS version 16 was used to enter and analyzed data. Descriptive analysis was performed to show the demographics in terms of mean and SD and that for perception and barriers in terms of percentage and frequency. Pearson Chi-square test was applied to draw an association between participation in structured physical activity and qualitative variables.

Results

Three hundred and nineteen young females participated in this study. The mean age of the study participants was 22.29 ± 2.25 . Most of the participants were unmarried and undergraduate students (table 1).

Out of 319, 45 % (n=142) of the participants engaged in structured physical activity, and 55% (n=177) participants did not do any structured physical activity. Statistically, there was no significant participation association with education level, occupation, and marital status (Table 2).

	Participation	Yes	No	P-value
Marital status	Unmarried	129	163	0.626
	Married	11	13	
	Others	2	1	
Education	Matriculation	0	1	1.635
	Intermediate	9	14	
	Undergraduate	100	126	
	Postgraduate	28	32	
Occupation	Others	5	4	2.36
	Student	89	96	

Table 2: Association between participation and marital status, education level, and occupation level

Most of the physically active participants perceived exercise as a source of happiness (93.5%), health improvement (92.25%), and fitness improvement (93.6%). However, those who do not engage in structured physical activity perceived that maintaining a healthy diet is more beneficial than exercise (68.8%), shown in Table 3.

Participation	Variable	Strongly disagree n (%)	Disagree n (%)	Neutral n (%)	Agree n (%)	Strongly agree n (%)
Yes (n=142)	Participating in SPA makes me happy.	2 (1.4)	0 (0)	7 (4.9)	88 (61.9)	45 (31.6)
	Participating in SPA improves health.	4 (2.8)	0 (0)	7 (4.9)	75 (52.8)	56 (39.4)
	Participating in SPA increases fitness levels	2 (1.4)	0 (0)	7 (4.9)	72 (50.7)	61 (42.9)
	Participating in SPA helps in reducing stress levels.	4 (2.8)	2 (1.4)	21(14.7)	65 (45.7)	50 (35.2)
	Participating in SPA helps to achieve desire weight	2 (1.4)	9 (6.3)	35 (24.6)	68 (47.8)	28 (19.7)
	Maintaining a healthy diet is more beneficial than exercise.	5 (2.8)	18 (10.1)	32 (18)	103 (58.1)	19 (10.7)
	Performing SPA is a time waste.	92 (51.9)	81 (45.7)	4 (2.2)	0 (0)	0 (0)
No (n=177)	Often feel tired; do not have enough energy to do any SPA.	9 (5.1)	35 (19.7)	36 (20.3)	84 (47.4)	13 (7.3)
	I feel SPA is not good for my health.	101 (57.1)	68 (38.4)	3 (1.6)	3 (1.6)	2 (1.1)
	Participating in any SPA is a waste of money.	70 (39.5)	81 (45.7)	19 (10.7)	6 (3.3)	1 (0.5)

Table 3: Perception of the participants structured physical activity (SPA)

Statistically, significant association was found only between participation and previous experience to structured physical activity.

By combining moderate and extreme barrier categories, the three prevailing barriers were lack of traveling facility (48.6%), unavailability of separate settings for females (46%), and lack of stamina (39.8%), shown in table 4.

Variables	Not a barrier n (%)	Somewhat of a barrier n (%)	Moderate barrier n (%)	Extreme barrier n (%)
Previous experience while participating in physical activity program.	180 (56.4)	92 (28.8)	40 (12.5)	7 (2.2)
Time limitation for participation in physical activity program.	87(27.3)	127 (39.8)	79 (24.8)	26 (8.2)
The financial cost of participation in physical activity program.	103 (32.3)	97 (30.4)	81 (25.4)	38 (11.9)
Lack of stamina to participate in physical activity program.	93 (29.2)	99 (31)	76 (23.8)	51 (16)
Lack of skills related to physical activity participation.	125 (39.2)	97 (30.4)	77 (24.1)	20 (5.3)
Unavailability of only females' settings.	67 (21.0)	105 (32.9)	84 (26.3)	63 (19.7)
Feel uncomfortable participating in physical activity program.	156 (48.9)	90 (28.2)	46 (14.4)	27 (8.5)
Limited facilities in the neighborhood	80 (25.1)	115 (36.1)	64 (20.1)	60 (18.8)
Lack of childcare facility.	115 (36.1)	86 (27)	67 (21)	51 (16)
Traveling facility.	77 (24.1)	87 (27.3)	88 (27.6)	67 (21)
Unavailability of a partner.	80 (25.1)	119 (37.3)	85 (26.6)	35 (11)

Table 4: Perceived barriers to structured physical activity (n=319)

Discussion

This study aimed to determine perceptions and barriers of young females related to participation in structured physical activity. More than half of the participants were less engaged in physical activity. Participants of the current study did not perceive barriers to a significant problem. However, the three most common factors limiting their participation include distant available facilities, non-availability of the separate portion for females to exercise, and lack of stamina.

In the current study, lack of traveling facilities was the most prevailing barrier as parks and gyms are not within walking distance. This finding is supported by the study conducted in Karachi in 2013, with most of the respondents as housewives and jobless females in addition to inconvenient schedules, few places to exercise, and less motivation from family¹⁹. This was also consistent with the study's findings conducted in the UK on inactive female university students²².

Unavailability of the female-only section to exercise was also a factor that restricted their participation. It is supported by a comparable study conducted in Karachi in adolescents in which it was discouraged by the parents of female adolescents to perform physical activity with the opposite gender²³. This finding correlate with the data obtained from the Arab countries where the non-availability of segregated facilities for females was reported to be a barrier towards physical activity^{2,20}. It could be due to Muslim women's culturally restrictive gender role and behavioral expectations, which discourage them from engaging in physical activity in co-settings²⁰.

Lack of stamina also came out as a moderate barrier which is supported by the findings of previous study in Karachi where less energy is reported as a major cause for not engaging in physical activity¹⁹. Similar findings were also found in a survey conducted in New Delhi University, India²⁴. The cohort study on girls also reported the lack of stamina as a consistent barrier to physical activity among girls across the adolescent period²⁵. Women at risk of type 2 diabetes also perceived lack of energy as an impending factor to physical activity²⁶.

Lack of time and social support were not the considerable factors limiting physical activity in current research. However, these factors were most frequently reported barriers in other studies across all age groups. A survey conducted in New Delhi, India, on barriers to physical activity in young adults also reported time limitation and lack of peer support as major barriers.²⁴ Similarly, Mexican adults specifically overweight and obese females of age between 20 and 65 years perceived time limitation major factor impeding physical activity, as reported by which are not parallel with the findings of the current study²⁷.

In another study, participation in resistance training program, a type of structured physical activity was also reported to be limited in females of 19 to 56 years of age due to the time constraint.²⁸ Lack of time was also reported by adolescent females as a barrier to physical activity in comparison to the adolescent males²⁹.

Lack of stamina and time were also the major constraining factors of exercise participation for working women, reported in a study conducted in Jordan³⁰. Participants who did physical activity strongly perceived that their health and wellness improve with exercise. This finding is supported by the previous study conducted in Karachi.¹⁹ Female adolescents also perceived improvement in a sense of wellbeing while engaging in physical activity²⁹.

In a qualitative study regarding participation in sports physical activity, the improvement in individual well-being was noted by most participants³¹. Active participants also perceived physical activity as a source of happiness in current study but none of the studies support this finding. Inactive participants of this study consider a healthy diet as an alternative to physical activity. However, none of the other study report this finding. Moreover, marital status does not contribute to affect physical activity participation in the current study which is contradictory to the result of previous study where married individuals were found to be less active than unmarried ones¹⁹.

This study was first in Karachi to determine perception of and barriers to structured physical activity among young females of Karachi. However, the results of this study cannot be generalized to the population due to the inherent weakness of non-randomized purposive sampling technique. Also, the participant pool was only limited to those having access to the internet and could read and understand the English language. The study did not contrast the difference in structured physical activity in different ethnic groups, difference in educational status, socio-economic status and occupation. Future studies should be conducted among both genders to contrast the difference in participation in physical activity program and to determine the difference in perception and barriers to structured physical activity among various socioeconomic and ethnic groups.

Conclusion

According to the current study, the subject's perception and barriers had no significant influence on physical activity programs. The common perception among those who participated found structured physical activity to be the source of happiness, improved health, and fitness levels. In contrast, those who did not participate feel tired and consider diet as an alternative to structured physical activity. However, lack of traveling facility, a separate section for females, and lack of stamina was the common barriers experienced by the participants.

AUTHORS' CONTRIBUTION:

The following authors have made substantial contributions to the manuscript as under:

Conception or Design: Tanzila Irfan, Kiran Asghar, Syed Shahzad Ali

Acquisition, Analysis or Interpretation of Data: Umama Abbasi, Kiran Asghar

Manuscript Approval & Writing: Kiran Asghar, Syed Shahzad Ali

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