Original Research Article

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Perceived barriers for performing regular physical exercises in nonexercising individuals of the age group 18 to 25 years

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ABSTRACT

Background: This study was aimed to find out barriers for performing regular physical exercises among non-exercising individuals of the age group 18 to 25 years under the category of physical, mental, college/ work related, environmental, social and others and to explore differences in perception of barriers with regards to gender and profession.

Methods: A questionnaire consisting of 36 items was prepared based on review of literature to assess the barriers for physical exercises. A google form link was sent across through social media platforms like WhatsApp, Instagram along with a video prepared by the researcher. Demographic details were filled and online consent was taken from 427 respondents. The 201 respondents fitting to the inclusion criteria were recruited. (Mean age 21.6±0.13 years).

Results: The 47.1% respondents were found to be "non-exercising". College/ work related barrier was reported to be a leading barrier followed by mental barrier. The least common barrier reported was social barrier.

Conclusions: The detailed analysis of barriers across genders and professions provides insight to health professionals-physical therapists, general physicians, psychologists about impact of barriers in this age group. Combined efforts of all health professionals, college/ work institution authorities shall play a major part in policy formulation at college/ work institutions to promote physical exercise participation as college/ work related barrier was the leading barrier.

Keywords: Physical exercise, Physical therapy, Young adults

INTRODUCTION

Physical inactivity is one of the modifiable risk factors for developing non-communicable diseases (NCDs). Although morbidity and mortality from NCDs mainly occur in late adulthood, exposure to risk factors begins in early adult life.¹

Population aged 10-24 years accounts for 373 million of the 1,210 million of India's population with every third person belonging to this age group. Indian population, especially young people, is passing through a nutritional transition and is expected to witness higher prevalence of adult NCDs such as hypertension, diabetes and chronic lung diseases in the coming years.²

Regular physical activity/exercise has proved to help prevent and manage NCDs. It also helps in preventing hypertension, maintain healthy body weight and can improve mental health, quality of life and well-being.³

Physical therapists use exercise as primary intervention to prevent, remediate or mitigate effects of disease and disability. Non-invasive practitioners, physical therapists are positioned professionally to be leaders in effecting health behaviour change.⁴ A knowledge and understanding about impact of barriers on young adult population shall help physical therapist and prime decision makers in formulation of policies and strategies to promote physical exercises at college, work place and community level.

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Many surveys have been conducted in the Western countries about perceived barriers to exercise among young adults. However, there is less evidence about such surveys in India.

This study was aimed to find out barriers for performing regular physical exercises among non-exercising individuals of age group 18 to 25 years under category of physical, mental, college/work related, environmental, social and others, to explore differences in perception of barriers with regards to gender and profession.

METHODS

This was a cross-sectional study that performed over period of a 8 months (November 2020 to June 2021). This

study was approved by institutional review board at K. J. Somaiya college of physiotherapy, Mumbai in January 2021. Data was collected from the March 2021 to April 2021.

Instrument

A questionnaire consisting of 36 items was prepared by the researcher based on review of literature.⁵⁻⁸ It was face validated by subject expert faculty members and had good internal consistency (Cronbach's alpha=0.886). The 36 items were grouped into 6 main categories-Physical, mental, college/ work related, environmental, social and others. Each category had total 6 questions. Each question was marked on Likert scale. (5=Strongly agree, 4=Agree, 3=Neutral, 2=Disagree, 1=Strongly disagree) (Table 1).

Table 1: Questionnaire.

S. no.	Barriers	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Physical						
1.	I feel that I am physically unfit to perform any kind of exercise (Too fat/too lean /too weak).					
2.	I am afraid of getting a physical injury during exercising.					
3.	I sweat a lot during exercising.					
4.	I feel too tired/exhausted after exercising.					
5.	I am not comfortable with my physical self (my body image) during exercising.					
6.	I am too lazy to move until it is very necessary.					
Mental						
7.	I feel I am physically fit so no need to exercise.					
8.	I cannot find an appropriate reason to begin exercising.					
9.	I feel depressed/jealous/insecure looking at other people exercising/working out efficiently.					
10.	I do not feel motivated to exercise even though it is important for me.					
11.	I start exercising but I am inconsistent.					
12.	I look unacceptable(weird/funny/lame) during exercising					
College/	work related					
13.	I have enough physical activity during day (travelling, at work/college activities), I feel there is no need to exercise.					
14.	My workplace/ college is too far away from my house hence travelling takes a lot of my time.					
15.	Working /college hours do not allow me to exercise.					
16.	I am too exhausted due to my work/academic commitments hence cannot exercise.					
17.	Regular exercising is not promoted at my work place/college.					
18.	I do not get enough rest during the week; hence I prefer to sleep in on holidays/days off.					
Environmental						
19.	No gyms near my locality.					
20.	No parks/running tracks near my locality.					
21.	My locality is too crowded to exercise. (Traffic, uneven terrains, busy roads)					
22.	Weather is not suitable to exercise outdoors.					

Continued.

S. no.	Barriers	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
23.	Air /noise pollution in my locality does not allow me to exercise.					
24.	No place to exercise at home.					
Social						
25.	Regular exercising is not promoted by my parents/family.					
26.	My parents do not feel there is any need for me to exercise because of my gender. (e.g., girl/female has to look after household. Boy/ male has the responsibility to earn for the family.)					
27.	My friends/colleagues are not supportive of me when it comes to exercising regularly.					
28.	Exercising indoors/outdoors is not acceptable in my community.					
29.	Other members of the community body shame me in public.					
30.	My locality is unsafe for exercising outdoors (eve teasing, robbery.)					
Others						
31.	Equipment /fitness classes are expensive.					
32.	Non availability of trained Professionals to teach me proper technique to exercise.					
33.	I believe it is better to opt for a healthy diet or any other solutions (giving quick results) for being fit rather than exercising.					
34.	I am not good at learning any new skill like exercising.					
35.	I do not have a company to exercise with.					
36.	Exercising in a group /outdoors makes me feel too self-conscious/aware.					

Sample size

The minimum sample size-197 was obtained using OpenEpi free source calculator using the following inputs- Anticipated proportion of individuals not exercising =50%,

Absolute precision=7%, confidence level=95%, level of significance=5%, design effect=1.

Subjects

"Non exercising" was defined as an "Individual from the age group of 18 to 25 years not participating in any moderate intensity physical activity for minimum 30 minutes each on at least five days of the week". A google form link was sent across through social media platforms like WhatsApp, Instagram along with a video prepared by the researcher. Demographic details were filled and online consent was taken from 427 respondents. The 201 respondents fitting to the inclusion criteria were recruited (Mean age 21.6±0.13 years).

Statistical analysis

Data was analyzed using descriptive statistical analysis using Microsoft excel and SPSS version 28. Unpaired t

test was performed across genders and professions to identify the differences in barrier perception.

RESULTS

The 47.1% respondents were found to be "non-exercising". Total 427 responses were received out of which 201 respondents (Mean age 21.6±0.13 years) fitting the inclusion criteria were recruited. Table 2 summarises demographic characteristics of the participants.

Table 2: Demographic details of participants.

Demographic details		Participants (%)		
Gender	Females	138 (69)		
Gender	Males	63 (31)		
Duofossion	Students	149 (74)		
Profession	Working	52 (26)		

Combining the response categories of agree and strongly agree, 47% respondents reported college/ work related barrier to be a leading barrier followed by mental barrier (42%). The least common barrier reported was social barrier (10%). Table 3 summarises the responses for each barrier category.

Mean value greater than 3 denotes significant perception of barrier. Females had 3 barriers above value of 3 and males had 2 barriers. Students and working individuals

both had 3 barriers each above the value of 3. Figure 1 and 2 represents the means values for each barrier for genders and profession.

Table 3: Summary of responses.

Barriers	Strongly disagree (%)	Disagree (%)	Neutral (%)	Agree (%)	Strongly agree (%)
Physical	9	32	20	28	11
Mental	11	30	17	27	15
College/ work related	9	26	18	30	17
Environmental	19	43	13	18	7
Social	34	45	11	7	3
Others	10	30	20	28	12

There was mean difference between barrier intensities across genders. However, mean difference for college/work related barrier was found to be statistically significant. Females had a higher mean score than males. Table 4 summarises mean and SD values along with p value for genders.

There was mean difference between barrier intensities across professions. However, mean differences for environmental barrier was found to be statistically significant. Working population had a higher mean score than students. Table 5 summarises mean and SD values along with p value for professions.

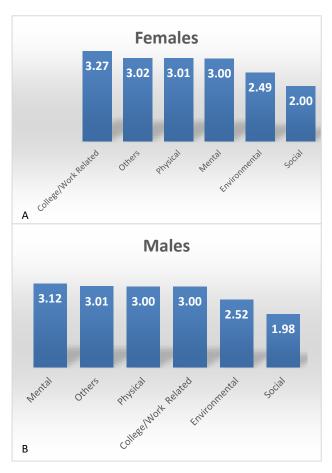


Figure 1 (A and B): Mean values for each barrier for genders.

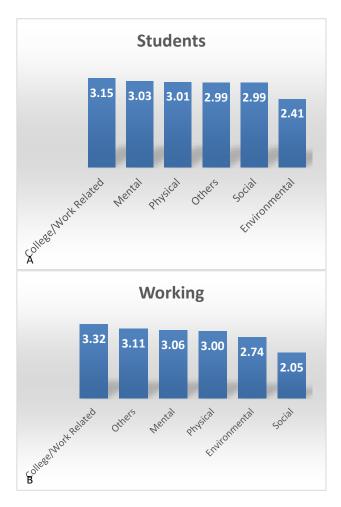


Figure 2 (A and B): Mean values for each barrier for profession.

Table 4: Unpaired T test across genders.

Barriers	Females	Males	P value
Physical	3.01 (0.64)	3.00 (0.71)	0.927
Mental	3.00 (0.52)	3.12 (0.59)	0.155
College/ work related	3.27 (0.75)	3.00 (0.85)	0.025*
Environmental	2.49 (0.82)	2.52 (0.87)	0.816
Social	2.00 (0.65)	1.98 (0.72)	0.761
Others	3.02 (0.72)	3.01 (0.67)	0.937

Mean (SD), *significant results

Table 5: Unpaired T test across professions.

Barriers	Students	Working	P value
Physical	3.01 (0.64)	3.00 (0.73)	0.948
Mental	3.03 (0.53)	3.06 (0.59)	0.727
College/ work related	3.15 (0.82)	3.32 (0.70)	0.190
Environmental	2.41 (0.80)	2.74 (0.91)	0.016*
Social	1.98 (0.61)	2.05 (0.81)	0.582
Others	2.99 (0.70)	3.11 (0.71)	0.302

Mean (SD), *significant results

DISCUSSION

Physical inactivity is one of the modifiable risk factors for NCDs accounting for 1.6 million deaths world wide. Exposure to this risk factor begins from young age. With changing lifestyle, physical inactivity has greatly increased in young adults.

The aim of this study was to provide detailed insight about perception of barriers among young adults (18-25 years) and explore differences in perception of barriers with regards to gender and profession. This is one of the first studies that categorizes barriers into physical, mental, college/ work related, social, environmental and others.

Beliefs regarding body structure and its influence on exercise were categorized under physical barriers. Mental blocks affecting exercise performance were categorized into mental barriers. Influence of hectic college/ work schedule, commitments, college/work environment on exercise performance was categorized into college/ work related barrier. Impact of infrastructural facilities, natural climatic conditions on exercise performance was categorized under environmental barriers. Influence of parents, friends, community members on individual's exercise performance was categorized under social barrier. Apart from the above specific categorizes certain factors like health perception, non-availability of exercise related facilities was categorized into others barrier.

Focused group discussions consider a specific community-based sample or university-based sample population; hence study findings cannot be assumed to be for the whole population. However, the extensive reach of social media has enabled to gather responses across varied population sample in this survey.

The 47.1% (201) respondents were found to be "non-exercising". There were 138 (69%) female respondents and 63 (31%) male respondents (Mean age 21.6 years, SD=0.13) in this study. 149 respondents (74%) were students and 52 respondents (26%) were working individuals.

The 47% respondents reported to have college/ work related as the common barrier for exercise. These findings are consistent with study by Ashton et al where busy lifestyle was reported as a barrier by almost all

participants from age group 18-25 in a study on young male adults.⁹ The least common reported was social barrier (10%) which is in contradiction to research findings by Anjali et al where lack of social support was found to be significant barriers among this age group.⁷

College/ work related, others and physical were the prominent barriers experienced by females. Mental barrier and others were the prominent barriers experienced by males.

College/ work related, mental and physical were the prominent barriers experienced by students. College/ work related, others, mental were the prominent barriers experienced by working individuals.

Perception of barriers for performing exercise among females and males of age group 18-25 is similar except for college/ work related barrier. Perception of barriers for performing exercise among students and working population of age group 18-25 is similar except for environmental barrier.

The similarities in barrier perception may be as this is a homogenous age group and all individuals are experiencing similar transitional phases in their life (Similar major life events).

The limitation of this study was there were many respondents from the age of 22 years. The proportion of male respondents was less as compared to females, proportion of working respondents was less compared to students.

CONCLUSION

The detailed analysis of barriers across genders and professions provides insight to health professionals-physical therapists, general physicians, psychologists about impact of barriers in this age group. Combined efforts of all health professionals, college/ work institution authorities shall play a major part in policy formulation at college/ work institutions to promote physical exercise participation as college/ work related barrier was the leading barrier.

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Institutional Ethics Committee

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