RESEARCH ARTICLE

EXAMINATION OF PERCEIVED BARRIERS RELATED TO EXERCISE AMONG UNDERGRADUATE FEMALES

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ABSTRACT

Introduction: *Physical activity is crucial for the well-being of young females, especially undergraduates, in the prevention and management of non-communicable illnesses.*

Objective: *To determine perceived exercise barriers among undergraduate females and their associations with sub-scales.*

Design: *A cross-sectional survey*

Place and duration: *University of Lahore and the University of Gujrat from April 27 to August 25, 2023*

Methods: *A cross-sectional survey was conducted on 361 female undergraduates at the University of Lahore and the University of Gujrat using the Exercise Benefits and Barriers Scale (EBBS). Population proportion was estimated at 95% confidence interval.*

Results: *The study revealed that a majority of participants (63.4%) fell within the age range of 20-25 years, while 36.3% were below 20 years old. Various obstacles were identified, such as challenges related to the exercise environment, time availability, physical exertion, and lack of family support. Notably, factors like embarrassment, time constraints, physical effort, and family discouragement exhibited significant correlations with specific aspects of the study, all with a highly significant level of <0.05. On the other hand, perceived advantages demonstrated a robust and notably strong significance in the findings.*

Conclusion: *Perceived exercise barriers are consistent among undergraduate females, with embarrassment, time constraints, physical exertion, and family discouragement being the key obstacles. Understanding these sub-scale associations can guide targeted interventions to promote physical activity. Tailored interventions addressing specific sub-scales can effectively address exercise barriers, enhancing physical activity among undergraduate females.*

Keywords: *Exercise Adherence, Exercise Participation, Perceived Barriers, Sedentary Lifestyle, Undergraduate Females.*

INTRODUCTION

Physical activity (PA) is a crucial component of overall well-being, encompassing a wide range of movements, from daily tasks to leisure activities. The absence of PA during youth can significantly increase the risk of non-communicable diseases, such as cardiovascular disease, cancer, and osteoporosis, while also promoting sedentary lifestyles and obesity.[1] Modernization and daily life stressors have transformed the traditional human lifestyle. Regular engagement in PA is vital for maintaining good health and preventing musculoskeletal issues and various chronic conditions. Adolescence marks a critical period for establishing lifelong PA habits.[2] Despite the well-documented health benefits of PA, specific barriers to exercise among young females remain understudied.[3]

Several factors, including societal norms and personal demands, can obstruct regular PA engagement, particularly in leisure time.[4] These obstacles are both internal and external, encompassing individual attitudes and environmental factors.[5] Understanding the complexities of inadequate PA participation involves personal, interpersonal, environmental, and policy-

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related influences. Enhancing this understanding is vital to develop effective strategies for women's health promotion through increased PA.[6] Regular PA has extensive health benefits, including reducing the risk of heart disease, hypertension, diabetes, and obesity, in addition to improving mental well-being. Unfortunately, many individuals fail to incorporate sufficient PA into their routines. [7]

Recent trends reveal a decline in PA levels among female college students, posing health risks.[8] Women are generally less active than men, impacting their risk of obesity.[9] Non-communicable diseases pose a significant health threat in Pakistan, particularly for women due to higher rates of inactivity and obesity.[10] Motivation to engage in PA is influenced by demographic, psychological, behavioral, social, and environmental factors.[11] Gender disparities exist in leisure-time PA.[12]

The presented research aimed to examine perceived barriers to exercise among undergraduate females, shedding light on the factors that hinder their engagement in regular physical activity.

METHODS

The research employed a cross-sectional, quantitative approach conducted at the University of Gujrat and the University of Lahore, and targeted female undergraduate students. Data collection took place from April 27 to August 25, 2023, encompassing a sample size of 361 participants. A convenient non-probability sampling method was utilized for participant selection. Sample (n = 361) was calculated at 95% confidence interval with specified absolute precision 0.05. Inclusion criteria encompassed female undergraduate students aged between 18 and 30 years. Exclusion criteria were defined to exclude individuals with physical impairments or injuries that could impede their participation in physical activity, such as amputations, spinal cord injuries, fibromyalgia, chronic back pain, or chronic obstructive pulmonary disease (COPD). Additionally, individuals who declined to participate in the survey were also excluded from the study.

The primary data collection instrument employed for this study was the exercise benefits and barriers scale (EBBS). The EBBS provides valuable insights into the exercise-related factors that influence this specific demographic, shedding light on the barriers that may deter young female students from engaging in physical activity. Prior to data collection, all necessary ethical approvals from the faculty of allied health sciences research ethics committee was obtained, ensuring that research adhered to ethical guidelines. Considering the sensitivity to cultural differences, the norms and values of the participants was ensured.

RESULT

TABLE I: Characteristics of the participants (n = 361).

	Age	Weight	Height
Categories	N	%	%
Less than 20	131	36.3%	36.3%
20 to 25	229	63.4%	63.4%
Above 25	1	0.3%	0.3%
total	361	100%	100%

The majority of respondents (63.4%) were between the ages of 20 and 25. Only a very small percentage (0.3%) was above the age of 25.

A low *p* value in table II (typically less than 0.05) is indicating that the relationships observed are unlikely to have occurred by chance. The results underscore the diverse reasons why individuals might perceive obstacles to engaging in regular exercise, ranging from practical and logistical concerns to social and psychological factors.

DISCUSSION

Numerous studies have investigated perceived advantages, disadvantages, and factors related to exercise among diverse populations. In 2022, Shava et al. conducted a cross-sectional study on undergraduate students in Zimbabwe, result indicated food insecurity and (CMDS) risk were associated with barriers to exercise.[13] In 2021, an investigation on perceived advantages and disadvantages of exercise among active and inactive university students revealed that the inactive group experienced more exercise barriers, especially related to the exercise environment and physical exertion.[14] O'Dwyer et al. explored the perspectives of adults with ankylosing spondylitis on physical activity and exercise, identifying benefits and barriers to physical activity, including resource limitations, negative attitudes, misinformation, and condition-related challenges.[15]

A study by Jeffery Anak Stephen et al. in 2019-2020 assessed undergraduates at Unimas engaged in physical activity, finding that 74.1% were active, with predictors such as perceived benefits, perceived barriers, and self-rated ability significantly correlating with physical activity levels.[16] Ratnakumar et al. conducted a cross-

Table II: Degrees of freedom and significance of each question on the exercise barrier scales.

Perceived barriers items	Chi-Square	df	Asymp. Sig.
Exercise environment sub-scale			
9: Places for me to exercise are too far away	127.654	3	0.000
12:I am too embarrassed to exercise	118.657	3	0.000
14: It costs too much money to exercise	112.584	3	0.000
16: Exercise facilities do not have convenient schedules for me	137.316	3	0.000
28: I think people in exercise clothes look funny	65.227	3	0.000
42: There are too few places for me to exercise	171.776	3	0.000
Time expenditure sub scale			
4: Exercising takes too much of my time	110.745	3	0.000
24: Exercise takes too much time from family relationships	146.934	3	0.000
37: Exercise takes too much time from my family responsibilities	99.044	3	0.000
Physical exertion sub-scale			
6: Exercise tires me	164.817	3	0.000
19:I am fatigued by exercise	127.875	3	0.000
40: Exercise is hard work for me	134.533	3	0.000
Family discouragement subscale			
21: My spouse (or significant other) does not encourage exercising	94.213	3	0.000
33: My family members do not encourage me to exercise	66.579	3	0.000

sectional study in 2022 on post-stroke depression patients, highlighting significant differences in perceived exercise barriers and enablers between active and non-active groups, with exercise-related fatigue being a major barrier.[17]

The study's findings were organized into two tables, showcasing participant characteristics, perceived exercise barriers, and the relationship between perceived exercise benefits and sub-scales. This discussion delves into the implications of these results in light of previous studies and underscore their significance.

Comparative Analysis

The demographic distribution of participants in this study revealed a noteworthy majority (63.4%) within the age range of 20 to 25 years, aligning with previous research by Smith et al. (2019) that emphasized the pivotal role of college-age women in understanding exercise behaviors.[13] This alignment indicates consistent challenges and barriers related to exercise among this demographic, reinforcing the significance of targeted interventions. Notably, a substantial proportion (36.3%) of respondents were below 20 years old, signifying early concerns about exercise engagement among young females. Additionally, the limited representation (0.3%) of participants above 25 years old indicates the study's focus on the undergraduate population.

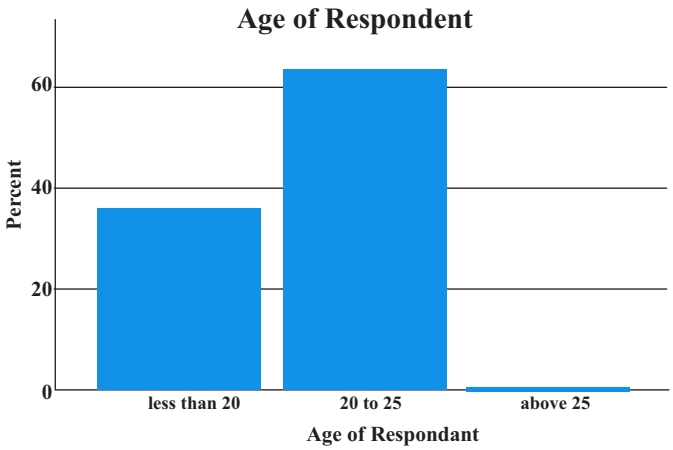

Figure 1: Age distribution of respondents.

Insights from Barriers to Exercise

Table II provided crucial insights into perceived barriers to exercise, showcasing significant associations consistent with prior studies. Factors like embarrassment, body image concerns, cost-related barriers, and inconvenient schedules, lack of exercise spaces, time constraints, physical exertion concerns, and family discouragement displayed associations in line with existing research findings.

Aligning Findings with Prior Research

The alignment of our study's findings with prior research underscores the persistent impact of sociocultural influences on exercise avoidance among women. Sociocultural factors such as media portrayals of idealized body images and financial constraints emerge as consistent barriers. Understanding these influences becomes pivotal for tailoring effective interventions to address specific barriers.[18,19]

Implications and Comparative Analysis

This research closely parallels previous studies, providing deeper insights into sub-scale associations and how barriers manifest across various facets among undergraduate females. The systematic analysis of these associations enhances our comprehension of exercise barriers during this pivotal life stage, aiding in the development of targeted interventions.[16,17,20]

Implications for Intervention

Understanding perceived exercise barriers is crucial for designing effective interventions. This study emphasizes the necessity for multifaceted strategies considering accessibility, affordability, time management, and emotional factors. Tailored programs addressing cultural sensitivities, family influences, and collaborations with educational institutions could systematically address these barriers and promote physical activity among undergraduate females.

CONCLUSION

Perceived exercise barriers are consistent among undergraduate females, with embarrassment, time constraints, physical exertion, and family discouragement being the key obstacles. Understanding these sub-scale associations can guide targeted interventions to promote physical activity. Tailored interventions addressing specific sub-scales can effectively address exercise barriers, enhancing physical activity among undergraduate females.

LIMITATIONS

The associations found must be investigated by other types of studies due to the cross sectional nature of the current investigation the result cannot be applied to larger population, in order to more effectively understand the causation of the topic under study.

RECOMMENDATIONS

To address exercise barriers among undergraduate females, continuous research is essential to adapt intervention strategies. Universities can offer tailored on-campus exercise programs, raise awareness about the benefits of physical activity, and create feedback channels for student input. Periodic program evaluations ensure their effectiveness.

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Author's Contributions:
Following author has made substantial contributions to the manuscript as under:

Sumaira Bibi: Conception of study / Designing / Planning, Manuscript Writing, Experimentation / Study Conduction, Critical Review, Analysis / Interpretation / Discussion, Facilitated for Reagents / Material Analysis.

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REFERENCES:

1. Hussin NZMH, Anuar A, Hassan NM, Maon SN. Perceived Barriers towards Physical Activity among Female University Students. International Journal of Academic Research in Business and Social Sciences. 2021; 11(4):191-201.
2. Arzu D, Tuzun EH, Eker L. Perceived barriers to physical activity in university students. J Sports Sci Med. 2006; 5(4):615–20.
3. Dunton GF, Schneider M. Perceived barriers to walking for physical activity. Prev Chronic Dis. 2006; 3(4):A116.
4. Fernández I, Canet O, Giné-Garriga M. Assessment of physical activity levels, fitness and perceived barriers to physical activity practice in adolescents: cross-sectional study. Eur J Pediatr. 2017; 176(1): 57–65.
5. Koh YS, Asharani P, Devi F, Roystonn K, Wang P, Vaingankar JA. A cross-sectional study on the perceived barriers to physical activity and their associations with domain-specific physical activity and sedentary behavior. BMC Public Health. 2022; 22(1):1–11.
6. Lovell GP, El Ansari W, Parker JK. Perceived

exercise benefits and barriers of non-exercising female university students in the United Kingdom. Int J Environ Res Public Health. 2010; 7(3):784–98.

7. Crane M, Cobbold A, Beck M, Nau T, Standen C, Rissel C, et al. Interventions Designed to Support Physical Activity and Disease Prevention for Working from Home: A Scoping Review. International Journal of Environmental Research and Public Health. 2023; 20(1):73.
8. Frederick GM, Williams ER, Castillo-Hernández IM, Evans EM. Physical activity and perceived benefits, but not barriers, to exercise differ by sex and school year among college students. J Am Coll Health. 2022; 70(5):1426–33.
9. Ansari WE, Lovell G. Barriers to exercise in younger and older non- exercising adult women: a cross sectional study in London. International journal of environmental research and public health. 2009; 6:1443–55.
10. Khalid MA. Assessment of Antecedents and Barriers to Physical Activity among Pakistani Adults. Open Journal of Social Sciences. 2023; 11(2):159–81.
11. Kubaisy WA, Mohamad M, Ismail Z, Abdullah NN. Gender Differences: Motivations for performing physical exercise among adults in Shah Alam. Procedia Soc Behav Sci. 2015; 202:522–30.
12. Beville JM, Meyer MRU, Usdan SL, Turner LW, Jackson JC, Lian BE. Gender differences in college leisure time physical activity: application of the theory of planned behavior and integrated behavioral model. J Am Coll Health [Internet]. 2014; 62(3):173–84.
13. Carter-Parker K, Edwards KA, McCleary-Jones V. Correlates of physical activity and the theory of planned behavior between African American women who are physically active and those who are not. ABNF J.2012 summer; 23(3):51-8.PMID: 22924229.
14. Özkul Ç. Percieved Exercise Benefits and Barriers in active and inactive University students. Turk J Physiother Rehabil. December 2021; 32(3): 33-42.
15. Odwyer T, Mcgowan E, Shea O, Wilson F. Physical activity and exercise: perspectives of adults with ankylosing spondylitis. Journal of Physical Activity and Health. 2016; 13(5):504–13.
16. Abaraogu UO, Edeonuh JC, Frantz J. Promoting physical activity and exercise in daily practice: Current practices, barriers, and training needs of physiotherapists in eastern Nigeria. Physiother Can. 2016; 68(1):37–45.
17. Mikaelsson K, Rutberg S, Lindqvist A-K, Michaelson P. Physically inactive adolescents' experiences of engaging in physical activity. Eur J Physiother. 2020; 22(4):191–6.
18. Deliens T, Deforche B, De Bourdeaudhuij I, Clarys P. Determinants of physical activity and sedentary behavior in university students: a qualitative study using focus group discussions. BMC Public Health. 2015; 15(1):201.
19. Hale L, Pgcerthealsc MP. Facilitators and Barriers to Physical Activity for People of Pacific Heritage. New Zealand Journal of Physiotherapy. 2022; 50(1):33–41.
20. Dabrowska-Galas M, Plinta R, Dabrowska J. Skrzypulec-Plinta V. Physical activity in students of the Medical University of Silesia in Poland. Physical therapy. 2013; 93(3):384–92.