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Exploring Barriers to Physical Activities Among Older Adults in Pakistan: Implication for Public Health Practice

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ABSTRACT

The aim of this study was to examine the barriers to physical activity and evaluate awareness of its associated health benefits among older adults in Bannu District, Pakistan, with a focus to bring public health interventions in the community. A cross sectional survey was conducted with 300 older adults aged 65 and above using convenience sampling. A 14 item closed ended questionnaire measured time availability, stakeholders' rates, environmental barriers, health restrictions and knowledge of physical activity benefits. Data was analysed using descriptive statistics. With emerged significant barriers 90% of participants having satisfactory time for engaging in some physical activities. Health conditions limited involvement for 60% of respondents, and 40% reported insufficient community facilities. Lack of cultural norms for physical activities as a major barrier was critically identified for 96%. Knowledge shortage was consider 40% for physical activity essential for health, 30% understood its general health benefits, 20% recognised mental health benefits, and just 4% were aware about its role in cardiovascular disease prevention or

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anxiety/depression treatment. Likewise 4% had received formal education regarding physical activity. Sociocultural and educational barriers were very large in Pakistani older adults even though having sufficient time. Clear knowledge gaps and absence of supportive cultural norms require targeted public health intervention. Community based educational programs and sufficient arrangement are necessary to promote active aging.

Keywords: Older Adults, Physical, Activities, Barriers, Health Literacy

Introduction

Physical activities are, any bodily movement produces by skeletal muscles requiring the use of energy beyond resting points (Jackson, 2024). The activities mentioned in this defection creates a cornerstone of healthy aging (Indrakumar & Silva, 2024). In addition to muscle strengthening and balance exercises, the World Health Organization (2020) advises older adults to participate in moderate intensity aerobic activity at least 150 minutes per week. Regular physical activity improves psychological wellbeing, slows down age related psychological changes and lowers the risk of long term diseases like depression, obesity, type 2 diabetes and cardiovascular disease (Biddle & Mutrie, 2007; McPhee et al., 2016). Likewise, structured exercise and unstructured daily activities confer health benefits (The United States Department of Health and Human Services, 2008).

Physical activities contain five primary domains— structured exercise, spare time hobbies, job related tasks, household tasks and active back and forth movement (Hu et al., 2003). Among older adults, high energy consuming activities like walking, swimming and cycling are mainly count on oxidative metabolism of carbohydrate, fats and proteins for adenosine triphosphate (ATP) production (Chamari & Padulo, 2015; Saghiv & Sagiv, 2020). Even with well documented significance, older adults in low and middle income countries make evident regarding rates of physically inactive, providing cause to increase long illness and early death (McPhee et al., 2016). As Pakistan undergoes a fast demographic change, the prediction of its population aged 65 and above is expected to grow significantly by 14% in 2050 (United Nation 2022). While physical inactivity older adults rate in Pakistan reach 70% (Khan & Ansari, 2021). Laziness increase the intensity of non-transmitted

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diseases, especially heart related barriers accounting for 34% of adult unhealthy appearance (world Health Organization, 2021). Physical, mental, social and environmental barriers have been identified due to this unhealthy appearance of older adults (Martin-Moya et al., 2020). Even with four types of barriers Pakistani context remains underexplored. Cultural norms giving value to lazy life style. Literacy rate is very limited. Infrastructure is not available in better condition. While restrictions for female create unique barrier that require context-specific exploration.

This research talks about the serious gaps to investigate the barriers for physical activities among Pakistani older adults and active good health. To carry on this aim, the research specific objective were to: 1. Identify primary barriers limiting physical activity stakeholders 2. Determine prevalence of specific barriers 3. Assess awareness levels regarding physical activity benefits and 4. Provide evidence based recommendation for public health practice.

Research Methodology

Study Design

A cross-sectional survey design was employed to collect data from a diverse group of older adults in Pakistan at a single point in time, with the aim of exploring barriers to physical activity and their implications for public health practice

Participants and Sampling

The target population included community-household older adults (≥65 years) in Bannu distrit. A convenience sample of 300 participants was recruited through community centers and local mosques. Eligibility criteria included: (1) age ≥65 years, (2) ability to communicate in Pashto or Urdu, (3) community- dwelling status, and (4) cognitive capacity to provide informed consent. Exclusion criteria included institutionalization or severe cognitive impairment. Sample size was determined by resource constraints and pilot study objectives, consistent with preliminary investigations in under-researched populations (Meredith et al., 2023).

Instrument

A 14-item structured questionnaire was developed through adaptation of validated instruments (Schutzer & Graves, 2004; McPhee et al., 2016) and expert discussion

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with Pakistani public health professionals. The instrument underwent forward-backward translation (English-Pashto-Urdu and pre-testing with 10 older adults to ensure cultural appropriacy and comprehension. Final items covered: covered: (1) time availability, (2) current stakeholders, (3) environmental resources, (4) health barriers, (5) sociocultural norms, and (6) knowledge of physical activity benefits across multiple health domains,

Data Collection and Analysis

Data were collected using a self-developed structured questionnaire administered to older adults in the Bannu District of Khyber Pakhtunkhwa Province, Pakistan.

Data were entered into SPSS Version 26. Descriptive statistics were computed for all variables, including frequencies, percentages, and means, Categorical data were summarized an n (%). Missing data were minimal (<1%) and handled through list wise deletion. No inferential statistics were applied as the study aim to investigate patterns of awareness and barriers rather than to test hypothesis.

Results

The results reveal several important insights into the barriers and awareness related to physical activity among older adults. A substantial majority of respondents (90%) reported having adequate time to participate in physical activity, and an equal proportion indicated that they engage in physical activity on a regular basis, suggesting that time availability is not a major constraint for most participants. However, access to supportive environments appears to be a concern, as 40% of respondents reported insufficient facilities for physical activity. Health-related barriers were also prominent, with 60% of participants indicating that illness or health conditions hinder their ability to engage in physical activity.

Social and cultural factors emerged as a significant barrier, as an overwhelming majority of respondents (96%) perceived the lack of a general culture or trend of physical activity as an obstacle to participation. Despite relatively high engagement levels, awareness regarding the health benefits of physical activity was notably low. Only 40% of respondents considered physical activity necessary for maintaining health, while the majority (60%) did not recognize its importance. Furthermore, a striking lack of formal education was evident, with 96% of

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respondents reporting that they had never been taught about the role of physical activity.

Knowledge gaps were consistently observed across various health domains. Only 30% of respondents were aware of the general health benefits of physical activity, while awareness of its role in mental health was even lower (20%). Similarly, just 10% recognized its effectiveness in reducing tension, and only 20% understood its contribution to improving physical fitness. Awareness of the preventive role of physical activity in reducing cardiovascular diseases and in the treatment of anxiety and depression was extremely limited, with only 4% of respondents acknowledging these benefits. In contrast, awareness was relatively higher regarding body weight management, with 60% of respondents recognizing the role of physical activity in maintaining a healthy body weight.

Overall, the findings indicate that while many older adults have the time and are already participating in physical activity, significant barriers remain in terms of health limitations, social norms, and most critically limited awareness and education regarding the broad physical and mental health benefits of physical activity.

Table 1: ***Barriers to Physical Activity and Health Awareness among Older Adults (N=300)***

Item	Statement	Yes		No	
		Freq.	Per%	Freq.	Per%
1	Have adequate time for physical activity	270	90	30	10
2	Participate in physical activity regularly	270	90	30	10
3	Sufficient facilities available	180	60	120	40
4	Illness/health condition is a barrier	180	60	120	40
5	Lack of general trend/culture is a barrier	288	96	12	4
6	Physical activity necessary for health	120	40	180	60
7	Ever taught about physical activity role	12	4	288	96
8	Know role of physical activity in health	90	30	210	70
9	Know role mental health	60	20	240	80
10	Know role in reducing tension	30	10	270	90
11	Know role improving physical fitness	60	20	240	80

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12	Know role in reducing cardiovascular disease	12	4	288	96
13	Know role in body weight management	30	60	120	40
14	Know role in treating anxiety/depression	12	4	288	96

Discussion

This study provides the first empirical investigation of physical activity barriers among older adults in rural Pakistan, revealing a complex interplay of health limitations, sociocultural norms, and profound knowledge shortages. The findings challenge assumptions about time constraints while highlighting critical intervention targets.

Paradox of Time and Stakeholders: The high rate of 90% reported time availability and current stakeholders contrasts sharply with established low physical activity rates in Pakistan (Khan & Ansari, 2021). This discrepancy likely reflects conceptual differences between unstructured daily movement and guideline similarity with exercise intensity. Participants may have thinking in conflict with routine activates like walking to mosque, household-tasks with purposeful physical activity, consistent with Sallis et al.'s (2006) observation that LMIC populations often underestimate exercise intensity requirements.

Health Barriers and Disability: The 60% occurrence of health-related barriers aligns with global literature demonstrating chronic disease as a primary barrier for participants (McPhee et al., 2016). In Pakistan's context, high rates of osteoarthritis, diabetes complications, and untreated hypertension likely create functional limitations. However, this also represent a missed opportunity, as physical activity serves as primary therapy for these conditions— as the participants may not clear due absence of health education and awareness program in this targeted population.

Critical role of sociocultural norms: The 96% occurrence of not suitable cultural norms as a barrier represents the study's most striking finding. In collectivist societies like Pakistan, health behaviours are profoundly shaped by social expectation and gender roles (Atif et al., 2020). The absence of visible peer stakeholders likely discourages individual to begin, along with safety concerns and limited public space for women. This finding suggest that individual level interventions will fail without community wide awareness campaign and seminars.

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Knowledge Deficits: The foundation barrier in systematic pattern of ignorance across health domains reveals a very high failure of health education. The 96% lack of formal education, along with 60% not recognizing the importance of physical activity for health, indicates that the absence of knowledge and motivation is the primary barrier to initiate. The relatively higher awareness of weight management (60%) versus cardiovascular benefits (4%) reflects pervasive obesity-focused messaging while overlooking broader health impacts. This knowledge gradient parallels findings from India and Bangladesh (Misty et al., 2021), suggesting regional health communication failures.

Conclusion

Pakistani older adults possess adequate time but confront formidable sociocultural and educational barriers to physical activity stakeholders. The striking absence of health knowledge, combined with weak cultural support and health limitations, creates a synergistic barrier system. Individual motivation alone cannot overcome these contraints. Public health practitioners must implement integrated strategies combining infrastructure development. Community-wide health literacy campaign, and healthcare system engagement to foster an environment where active aging becomes normative, accessible, and understood. Without such comprehensive approaches, Pakistan's growing older adult population faces accelerated functional decline and chronic disease burden.

Implications

These findings provide the right to a multi-level intervention approach:

Community Infrastructure Investment: The 40% reporting insufficient facilities requires developing age-friendly public spaces, including shaded walking paths, keep apart exercise areas for women, and accessibility modifications consistent with WHO (2021) age-friendly city guidelines.

Culturally Personalised Health Literacy Campaigns: Mass media campaigns containing trusted community leaders (imams, elders) spreading messages about physical activity benefits, particularly its role in disease management and mental health, are essential. Content must address specific knowledge gaps identified (cardiovascular, mental health benefits).

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Social Norm Interventions: Community-based group exercise programs, get benefit of existing social structures (e-g., mosque-based walking groups, and women's community centers) can create visible stakeholders trends. Peer mentorship models have proven effective in similar LMIC contexts (Mersani et al., 2022).

Healthcare System Integration: Participants were reported 96% without formal education. Doctors are primary source to be use for the purpose of awareness. The current heath care meeting could be controlled by teaching doctors to recommend physical activity as part of routine medical treatment.

Limitations

The researcher found several limitations when interpreting its findings and comparing the literature with the results in the discussion that provide deeper understanding to generalize the study wold wide. The convenience sample of 300 male older adults recruited completely from community centers and mosques within Bannu district limits the representativeness of the data. This sampling approach over represents socially active men while excluding older women entirely, despite cultural evidence that gender-based restrictions are a major determinant of physical inactivity in Pakistan. Consequently, the findings cannot be generalized to the broader population of older adults, particularly females or those living in rural and tribal settings.

Father more, the study depend on self-reported data, which may be subject to recall bias and social desirability effects. The high rate of reported participation (90%) contrasts with national data showing lower activity levels among older adults. No objective validation tools (e.g., accelerometers) were used, which limits the accuracy of activity measurement. Additionally, although the questionnaire was adapted from validated instruments and translated into the local language, formal psychometric validation was not conducted, raising concerns about construct validity and cultural relevance among participants with low literacy levels.

Likewise, the perceived data did not identify the cause and effect between identified barriers e.g., health status, environmental conditions, awareness and actual participation in physical activity. Because the actual focus of researcher was to identify the barriers. As farther digging the study captures only one point in time

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and does not account for seasonal or temporal changes that may affect activity patterns.

In addition, the special focus on a single semi-urban district (Bannu) limits geographic and cultural variety. Environmental infrastructure, socioeconomic conditions, and healthcare access are different through Pakistani regions. Consequently, the reported 40% insufficient facilities and 96% cultural barriers may not accurately represent the involvements of older adults in other regions.

Similarly, the analytical scope was limited to descriptive statistics. While this approach is appropriate for exploratory objectives, it does not allow examination of relationships among variables or control for confusing factors because of extraordinary focus on barriers' recognition.

As a final fact, potential response biases must be recognised. The 78% of participants with no formal education, may have affected understanding of certain questionnaire items, possibly expanding the reported values of cultural barriers and underestimating awareness of the health benefits of physical activity.

Overall, these limitations show the exploratory nature of the study and underscore the need for a very brief, clear and comprehensive future research.

Recommendations

To address the limitations and build on its findings, several recommendations are proposed for future search.

1. Larger, population-based studies using objective physical activity measurement (acceleromery) are needed.
2. Mixed-methods research should explore gender-specific barriers and cultural meanings of aging and activity.
3. Intervention development research should test multilevel approaches targeting knowledge, norms, and infrastructure simultaneously.
4. Longitudinal studies can examine barrier dynamics as Pakistan's demographic and epidemiologic transitions progress.

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