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Contribution Rate of Physical, Psychological, and Environmental Obstacles to Physical Inactivity Among Older Adults and Retirees in Erbil

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Abstract

This study was aimed to identify the contribution rate of physical, psychological, and environmental obstacles to physical inactivity among older adults and retirees in Erbil men aged 60 to 68 years, culturally distinct setting. The focus is on identifying obstacles to physical activity such as walking, jogging cycling and other activities also, understanding the factors that can motivate this population to engage in exercise. The researcher hypothesized that physical, psychological, and environmental obstacles will be negatively reflect to physical activity levels among elder and retirees, while social support will be positively associated.

Methodology: A descriptive method approach was used, combining surveys to assess the perceptions and behaviours' of elderly participants regarding physical activity, along with field observations at locations where elderly individuals gather or rest. The study focused on both self-reported data and direct observations to gather insights into the factors influencing physical activity participation.

Results: The research identified several key obstacles to physical activity, including physical limitations, psychological factors (such as fear of injury), social influences, and environmental constraints (e.g., lack of adequate space for exercise). Despite these obstacles, the study found that even simple forms of exercise could serve as a motivating factor for elderly individuals, helping to increase their engagement and the duration of physical activity. These findings can help the relevant city authorities implement necessary interventions by ensuring appropriate health services, establishing essential infrastructure, and providing adequate spaces for walking and physical activity that are free from obstacles. Social, environmental, and psychological obstacles can also be mitigated through awareness campaigns, guidance, and the promotion of motivation via community programs.

نسبة مساهمة المعوقات البدنية والنفسية والبيئية بالعزوف عن ممارسة النشاط البدني لدى كبار السن والمتقاعدين في اربيل

ملخص

الهدف من الدراسة: هدفت هذه الدراسة إلى التعرف على نسبة مساهمة المعوقات البدنية والنفسية والبيئية وتحديد المعوقات المسببة للعزوف الكبار السن والتقاعدين عن ممارسة النشاط الرياضي ، الذين تتراوح أعمارهم بين 60 و68 عامًا.. افترض الباحث أن العوائق البدنية والنفسية والبيئية ستنعكس سلباً على مستويات النشاط البدني بين كبار السن والمتقاعدين، في حين أن الدعم الاجتماعي سيكون له ارتباط إيجابي.

المنهجية: تم استخدام المنهج الوصفي، مع الجمع بين الاستبانات لتقييم تصورات وسلوكيات المشاركين من كبار السن فيما يتعلق بالنشاط البدني، بالإضافة إلى الملاحظات الميدانية في المواقع التي يتجمع أو يستريح فيها كبار السن. ركزت الدراسة على كل من البيانات المستندة إلى التقارير الذاتية والملاحظات المباشرة للحصول على رؤى حول العوامل المؤثرة في مشاركة كبار السن في النشاط البدني.

النتائج: حددت الدراسة عدة عوائق رئيسية أمام ممارسة النشاط البدني، بما في ذلك القيود البدنية، والعوامل النفسية (مثل الخوف من الإصابة)، والتأثيرات الاجتماعية، والقيود البيئية (مثل نقص المساحات المناسبة لممارسة الرياضة). وعلى الرغم من هذه العوائق، أظهرت الدراسة أن حتى الأشكال البسيطة من التمارين يمكن أن تكون عاملاً محفزًا لكبار السن، مما يساعد على زيادة مشاركتهم ومدد ممارستهم للنشاط البدني. يمكن أن تساعد هذه النتائج السلطات المحلية المعنية على تنفيذ التدخلات الضرورية من خلال توفير الخدمات الصحية المناسبة، وإنشاء البنية التحتية الأساسية، وتوفير مساحات مناسبة للمشي وممارسة النشاط البدني خالية من العوائق. كما يمكن التخفيف من العوائق الاجتماعية والبيئية والنفسية.

الكلمات المفتاحية: المعوقات، كبار السن، والنشاط البدني

Introduction

As individual's age and transition into retirement, a critical question arises: how can healthy behaviours are effectively promoted to support physical and mental well-being in later life? Providing a supportive, health-promoting environment for older adults particularly retirees is a fundamental responsibility of health institutions, policymakers and community stakeholders. Despite the availability of various facilities and programmes, participation in physical activity among this demographic remains low. This lack of engagement is often attributed to several obstacles, including limited health literacy, insufficient awareness of the benefits of regular exercise, and at times a lack of motivation or access to suitable programmes.

Raising awareness among older adults about the extensive physical, psychological and social benefits of physical activity is therefore essential (World Health Organization, 2015). Encouraging regular participation in exercise and recreational activities is a core component of preventive health strategies for ageing populations (Chodzko-Zajko et al., 2009). It is well established that ageing is associated with a higher incidence of chronic diseases such as type 2 diabetes, hypertension, cardiovascular disease and cognitive decline (American Heart Association, 2020). Sedentary behaviour and physical inactivity have been consistently identified by health authorities as major contributing factors to these conditions (Chodzko-Zajko et al., 2009). Addressing this challenge requires a multi-faceted approach: removing participation obstacles, promoting individual and community-level awareness, and developing accessible, age-appropriate facilities and programmes (World Health Organization, 2015). Such efforts could significantly improve health outcomes and overall quality of life among the elderly (American Heart Association, 2020).

The preventive effects of physical activity in particular its role in reducing the risk of osteoporosis and improving mental and social well-being are well documented (Chodzko-Zajko et al., 2009; World Health Organization, 2015). Therefore, even simple, regular exercises can motivate older adults and retirees to increase both the frequency and duration of their activity (Chodzko-Zajko et al., 2009). Although global exercise participation among older adults averages just 44%, clear data on the specific obstacles faced by retirees remain limited (Mohammadi et al., 2020). Through observations and field visits to institutions and public spaces where the elderly gather, the researcher has identified several potential obstacles and facilitators, including psychological, social and environmental factors—most notably the lack of adequate exercise space. It is hypothesised that physical, psychological and environmental obstacles will be negatively related to physical activity levels among older adults and retirees, while social support will be positively associated.

Accordingly, this study aims to examine participation levels and key obstacles to physical activity among retirees and older adults in retiree centres and public parks in Erbil Governorate.

Methodology

Participants

This study applied a descriptive survey design to evaluate participation in physical activity and identify perceived obstacles among elderly and retired individuals in public parks and retiree centres in Erbil Governorate. The target population consisted of elderly and retired individuals who regularly visit these public spaces in Erbil city centre.

Prior to distributing the questionnaire, the instrument was reviewed by experts in the fields of measurement and evaluation, to ensure the content validity of the items and questions relevant, to population study. On Wednesday (08.01.2025), the questionnaire was pre-tested with a sample of 88 elderly and retirees. Based on the results, certain items were revised and changes were made to the questionnaire format. To ensure accurate identification of obstacles, minimize

sample variability, and enable precise data analysis of physical activity patterns, this study focused exclusively on elderly and retired men. On Thursday (16.01.2025), a questionnaire was distributed, and responses were collected from a sample of 266 participants 148 retirees and 118 older were randomly selected. The questionnaire was administered in person face to face to ensure clarity and to assist participants when needed.

The questionnaire was specifically designed to assess perceived obstacles to physical activity among older adult males aged 60–68. It consisted of a single section with a total of 16 items, each representing a potential obstacle to engaging in regular physical activity. These items were developed based on existing literature and were adapted to fit the cultural and environmental context of the participants.

Each item was rated using a 5-point Likert scale, where:

Strongly disagree	Disagree	Not Sure	Agree	Strongly agree
1	2	3	4	5

This scale allowed participants to express the degree to which they experienced each barrier.

- The 16 items covered a broad range of barrier categories:
- **Physical health limitations** (fatigue, joint pain, chronic illness)
- **Psychological and motivational factors** (lack of energy, low motivation, mental stress)
- **Social and cultural influences** (lack of support, cultural beliefs about aging and activity)
- **Environmental and logistical challenges** (unsafe areas, weather conditions, lack of transportation)

Data Analysis

Data collected through the questionnaire were analysed using (Microsoft Excel and SPSS Packages version 27). The following analyses were conducted:

Reliability Analysis

Cronbach's Alpha was 0.80, for the entire scale which indicating good internal consistency.

Results

The table below presents the mean, standard deviation, minimum, and maximum scores for each item.

Table (1) mean, standard deviation, min, max and contribution rate (%) for each item.

Obstacles	**Mean**	**Std**	**Min**	**Max**	Contribution Rate (%)
I easily feel tired after minimal effort.	4.34	0.78	3.00	5.00	6.10%
My health condition (e.g., chronic diseases or injuries) prevents me from being physically active.	4.18	0.82	3.00	5.00	5.87%
I feel pain in my joints or muscles when I try to walk or exercise.	4.49	1.05	1.00	5.00	6.31%
I feel weak or lack the energy to be physically active.	4.00	1.22	1.00	5.00	5.62%

I don't feel motivated to be physically active.	4.56	0.62	3.00	5.00	6.41%
I'm not confident in my ability to maintain regular physical activity.	4.03	1.27	2.00	5.00	5.66%
Mental stress or low mood prevents me from being active.	4.40	0.99	1.00	5.00	6.18%
I worry my health might worsen if I exert myself.	4.78	0.41	4.00	5.00	6.71%
I don't have a walking or workout companion.	4.98	0.15	4.00	5.00	6.99%
My family or friends don't encourage me to be active.	4.37	0.99	1.00	5.00	6.14%
I feel shy or uneasy when exercising in front of others.	4.78	0.41	4.00	5.00	6.71%
In our culture, older adults are not expected to be physically active.	4.46	0.79	1.00	5.00	6.26%
There are no suitable or nearby places for physical activity.	4.49	0.50	4.00	5.00	6.31%
Extreme heat, cold, or rain keeps me from being active.	4.07	1.00	1.00	5.00	5.72%
My surroundings don't provide safe walking or activity spaces.	4.72	0.65	3.00	5.00	6.63%
It's hard to reach activity locations due to distance or lack of transportation.	4.54	0.87	1.00	5.00	6.38%

Figure (1) Contribution of Physical, Psychological, and Environmental Obstacles to Physical Inactivity Among Older Adults and Retirees in Erbil

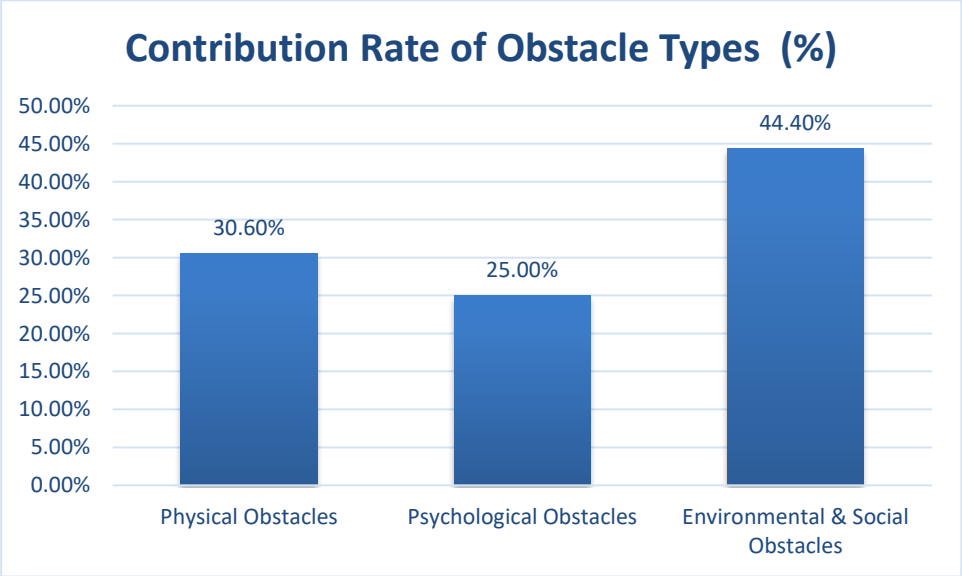


Figure (2) Average scores for obstacles to physical activity

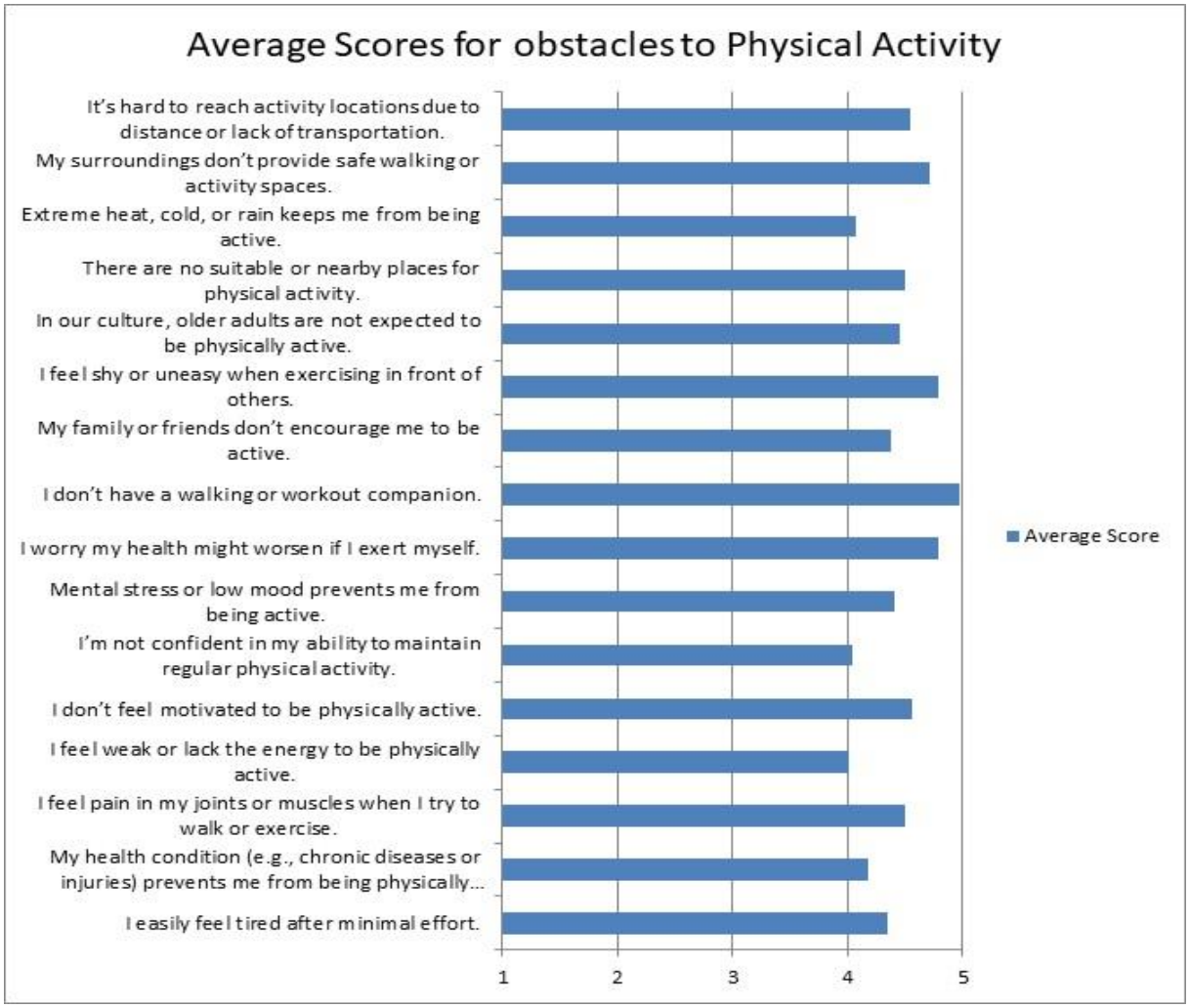
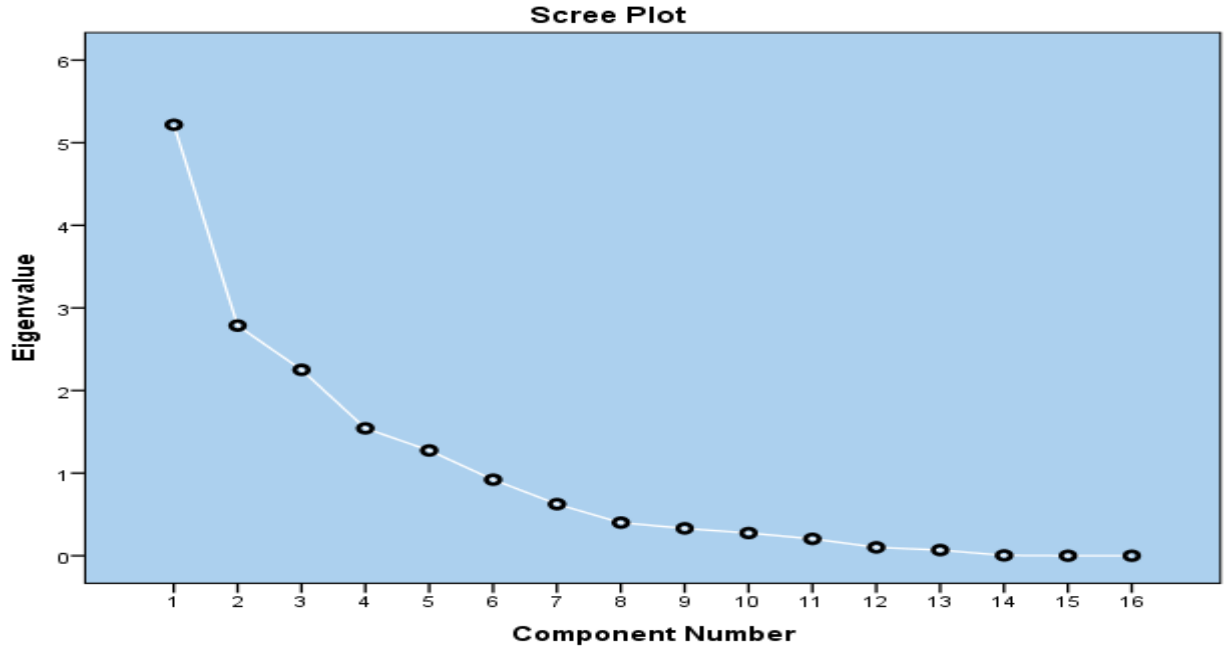


Figure (3): shows screen plot obstacles factor



The analysis aimed to identify the key obstacles to physical activity among older adult males aged 60–68. Based on the results from descriptive statistics, correlation analysis, factor analysis, and visualization techniques, several important insights emerged. Based on screen plot obstacles factor, 16 items measuring perceived obstacles to physical activity could be grouped into a smaller number of underlying factors. The scree plot and eigenvalues indicated a clear "elbow" point, suggesting that four major components could sufficiently represent the data. These components factor of obstacles presented in the table below.
Table (2) shows components factor of obstacles participant in to physical activity

Physical Health Obstacles	Including fatigue, joint or muscle pain, chronic illness, and low energy.
Psychological and Motivational Obstacles	Including lack of motivation, low self-confidence, and mental stress.
Social and Cultural Obstacles	Including lack of encouragement, cultural expectations, and discomfort around others.
Environmental Obstacles	Including lack of safe or nearby places, adverse weather, and transportation difficulties.

Obstacles to physical activity

The horizontal bar chart of average scores illustrated which obstacles were most commonly reported, with physical health obstacles receiving the highest mean ratings. Conversely, cultural and social obstacles scored lower on average. The items with the highest scores were:

- "I feel pain in my joints or muscles when I try to walk or exercise."
- "I easily feel tired after minimal effort."
- "I feel weak or lack the energy to be physically active."

Discussion

This study was aimed to explore the contribution rate of physical, psychological, and environmental obstacles to physical inactivity among older adults and retirees in Erbil men aged 60 to 68 years in urban, culturally distinct setting. The focus is on identifying obstacles to physical activity and understanding the factors that can motivate this population to engage in exercise. Based on the results, environmental and social obstacles such as lack of safe spaces, transportation issues, and absence of social support are the most significant factors hindering physical activity among older and retired males in the study. However, physical, psychological, play a role. Alongside with this key finding within this research, several researches attempted to explore the obstacle among elder in participant in the physical activities. A study of 199 independently living older adults found that perceived obstacles to physical activity were closely associated with age and overall health status (Booth et al., 1991).

Similarly, a systematic review of 37 studies involving more than 26,000 older adults identified key obstacles such as fear of falling, health-related concerns, and environmental limitations. The review also highlighted that social support and access to appropriate facilities were among the strongest motivators for engaging in physical activity (Kirkland et al., 2024). In a qualitative study conducted in Taiwan, obstacles such as physical frailty, fear of injury, prior sedentary lifestyle, and environmental restrictions were identified among 90 nursing home residents. The authors emphasized the importance of developing context-specific strategies to promote physical activity in institutional settings (Cheng, Chair and Chau, 2010).

Limitations of the study

To ensure that results are more representative of population, future research should place equal emphasis on both genders and further explore ways to remove barriers to physical activity among the elderly.

Conclusion and Recommendation

Based on this conclusion, local authorities can develop appropriate programs that include issuing guidelines and raising awareness to eliminate social and psychological barriers. In addition, by creating supportive environments and providing suitable facilities in various locations, they can offer strong incentives for this group to participate in physical activity.

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