

ORIGINAL ARTICLE**Investigating the Relationship between Psychological Hardiness of the Elderly and Participation in Sports Activities with the Mediating Role of Social Support and Self-Efficacy****Samin Mehrinezhad Khotbesara¹, Nasrin Aziziankohan², Farzad Nobakht³, Mehrdad Moharamzadeh⁴**

1. Ph.D Student, Department of Sports Management, Faculty of Educational Sciences and Psychology, University of Mohaghegh Ardabili, Ardabil, Iran.

2. Professor, Department of Sports Management, Faculty of Educational Sciences and Psychology, University of Mohaghegh Ardabili, Ardabil, Iran

3. Associate Professor, Department of Sports Management, Faculty of Educational Sciences and Psychology, University of Mohaghegh Ardabili, Ardabil, Iran.

4. Professor, Department of Sports Management, Faculty of Educational Sciences and Psychology, University of Mohaghegh Ardabili, Ardabil, Iran.

***Correspondence**

Nasrin Aziziankohan

E-mail: n.azizian@uma.ac.ir

Received: 17/Sep/2025

Accepted: 17/Nov/2025

Published Online: 08/Sep/2026

How to cite

Mehrinezhad Khotbesara, S., Nasrin ziziankohan, N., Nobakht, F., & Moharamzadeh, M. (2026). Investigating the Relationship between Psychological Hardiness of the Elderly and Participation in Sports Activities with the Mediating Role of Social Support and Self-Efficacy. *Applied Research of Sport Management*, 15(1), 147-164.

EXTENDED A B S T R A C T**Introduction**

Old age is a sensitive period of human life and paying attention to the issues and needs of this stage is a social necessity (Zhong et al., 2024). With the decrease in life expectancy, the elderly population has increased significantly, and with the increase in the elderly population, the proportion of mental and physical diseases has increased, and this has ultimately caused movement restrictions among the elderly and in many cases the elderly are unable to perform their activities (Lu et al., 2024). One of the important issues in old age is the changes that occur in the level of mental health, so that a significant number of people who go through this period face depression, anxiety, and physical and social dysfunction, all of which are caused by a decline in mental health symptoms (Kashani Movahed et al., 2018). It is important to know that physical activity and exercise are beneficial for the elderly (Rodriguez-Aylon et al., 2019). Physical activity and exercise delay the aging process, and older adults who are physically active have better physical and mental health (Pasco and Parker, 2019). Research on the motivational factors for participating in sports and physical activity has shown that the type and level of physical activity and exercise, social, economic, and psychological factors are very effective in motivating individuals to participate in sports and physical activity (Tran et al., 2022; Saez et al., 2021; Kearney et al., 2019; Diehl et al., 2018). Participation in physical activity and exercise creates vitality and social support in old age (Lahoud et al., 2019) and has many effects on the physical and mental health of humans and prevents the occurrence of many diseases, including psychological diseases (Kremer et al., 2014).

Physical activity can help reduce anxiety and depression, create a kind of protection and shield against psychological stress, increase self-confidence, improve mood, and develop mental health (Maogri and Musoumchi, 2021). Considering that sports are of great importance as a factor of participation of all people in society, especially the elderly as a relatively forgotten group, sports should be promoted as an important part of the lives of the elderly and an effective indicator of their health and well-being. It can be said with certainty that society will face serious issues of the elderly and their problems in the near future. Therefore, aging and the special conditions of the elderly and ensuring their mental and physical health are among the issues that make such research necessary. Since personality and psychological factors, along with environmental factors such as the level of community support, can affect individuals' participation in activities that provide their physical and mental health, one of the most important of which is undoubtedly the participation of individuals in sports activities, and on the other hand, given the research gap, especially in the statistical population considered in the present

study, which is the elderly of Guilan province, the present study was conducted with the aim of investigating the relationship between psychological hardiness of the elderly and participation in sports activities with the mediating role of social support and self-efficacy.

Methodology

The present study is applied in terms of its purpose, which is the application of the results in a specific context, and in terms of the type of data collection and information, it is a descriptive-survey of the correlation branch and of the structural equation modeling type, and since the data was collected over a specific period of time, it is considered cross-sectional in terms of time. The statistical population of the study was elderly men and women aged 55 to 60 who engaged in physical activity at least one day a week in clubs and parks. Given the vastness of the statistical population, the number of statistical samples was determined using the Cochran formula for the large population as 384 people as the sample size, which were selected using the two-stage cluster sampling method. In this method, all units of the population have an equal chance of being selected in the sample. In the cluster sampling phase of this study, the province of Gilan was first divided into four parts (north, south, east and west of the province) and the elderly of that city were selected from each part (north, south, east and west of the province). Astaneh city was selected from the northern part, Rasht from the central part, Langrud city from the eastern part and Talesh city from the western part. The data collection tools were the Ahvaz Psychological Hardiness Questionnaire, Sherer and Maddox Self-Efficacy (1982),

Sherborne and Stewart Social Support (1991), and Physical Activity Participation Questionnaire (PAPQ). All the tools used in the present study are standard and have high validity and reliability. In the present study, in order to re-examine the research tool in the statistical population considered in the present study, the face and content validity of the questionnaires were reviewed and confirmed by 10 sports management experts, and the reliability of the questionnaire was also examined using the Cronbach's alpha test, which yielded values of 0.83, 0.89, 0.91, and 0.87 for the research questionnaires, respectively. In order to analyze the data, the demographic information of the participants in the present study was first examined and described, and then the data were analyzed using structural equation modeling and Sobel tests. All analyses were performed in SPSS version 23 and SmartPLS version 3.1.1 software at a significance level of 0.05.

Findings

Based on the findings, the percentage of respondents in the statistical sample by gender shows that women (59%) accounted for a larger share of the statistical sample than men (41%). The results also showed that 25% of the statistical population do physical activity every day and only 7% do physical activity once a month. 30% of the population also do physical activity between 30 and 45 minutes a day and 25% do physical activity less than 45 minutes a day. In this study, structural equation modeling (SEM) was used to analyze the data. For this purpose, first, the fit indices of the first-order reflective and second-order constructivist measurement models were used to examine the fit of the research model. To examine the fit of the first-order reflective measurement models, composite reliability indices, Cronbach's alpha, factor loadings, convergent validity (AVE), and the Fornell-Larker index (divergent validity) were used, and to examine the second-order constructivist fit, the variance increment index (VIF) was used. An examination of the factor loading coefficients of each of the questionnaire questions showed that the factor loadings of all questions were greater than 0.4. All variables obtained Cronbach's alpha and composite reliability values higher than 0.7, AVE index higher than 0.5 and VIF index lower than 5, therefore the instrument used in this study has reliability, convergent validity and variance increase rate and the research model also has a good fit.

The AVE root value of all first-order variables is greater than the correlation value between them, which indicates the divergent validity of the research instrument and the good fit of the research model. At a 95% confidence level, based on the results of Table 3, considering that the t-statistic value of all paths is greater than 1.96 and their significance is less than 0.05, it can be stated that the research model is appropriate and all paths are confirmed. Also, according to the results of this table, it can be stated that psychological toughness ($p=0.001$; $t=14.803$), self-efficacy ($p=0.001$; $t=14.806$) and social support ($p=0.001$; $t=13.827$) have a direct and significant relationship with sports participation. The results of Table 3 also showed that psychological toughness has a direct and significant relationship with self-efficacy ($p=0.001$; $t=33.444$) and social

support ($p=0.001$; $t=18.259$). According to the results of the Sobel test, which was examined at a 95% confidence level, since the Sobel statistic value in both directions is greater than 1.96 and its significance is less than 0.05, it can be stated that self-efficacy ($p=0.001$; $z=12.126$) and social support ($p=0.001$; $z=10.918$) play a mediating role in the relationship between psychological toughness and sports participation.

Discussion and Conclusion

In general, based on the results of the study, it can be stated that elderly people who have a high ability to cope with life's stresses and challenges, and who also have a good communication network with family, friends, peers, coaches, etc., who can rely on them in times of need and receive emotional, informational, and instrumental support, and who also believe in their ability to successfully perform activities, engage in sports activities more than others. Therefore, promoting the resilience of elderly people through social support and increasing their self-efficacy is an effective measure for their participation in sports activities. It is worth noting that the present study, like other studies, has limitations, in this regard, we can point out the lack of examination of the effect of variables such as the economic and social status of the elderly on the results of the study.

Since other variables, including social and economic conditions, can probably affect the participation of elderly people in sports activities, it is suggested that the role of such variables should also be evaluated in future studies. Therefore, promoting the hardiness of the elderly through social support and increasing their self-efficacy is an effective measure for their participation in sports activities.

KEY WORDS

Psychological Hardiness, Participation of the Elderly, Sports Activities, Social Support, Self-Efficacy.

