

## Research Article

### Modeling the Impact of Social Factors on Citizen Sports Participation, Physical and Mental Health

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#### Abstract:

The aim of this study was to investigate the effect of social factors on sports participation, physical and mental health of Shirazi citizens. This was a descriptive study on 400 citizens who referred to sports venues in Shiraz for physical activity. The data collection tool was a researcher-made questionnaire that was organized into three sections: social factors (11 questions), physical health (6 questions), and mental health (9 questions). The questionnaires were provided to the statistical community after confirming the content validity. Research data were analyzed using structural equation modeling in PLS software environment. According to the results of the study, social factors had a direct and significant effect on sports participation, physical, and mental health. The mediating role of sports participation was also observed. Therefore, due to the low level of social support among Shirazi families, it is necessary to institutionalize sports culture among individuals to interpersonal variables such as support and social norms through citizens' awareness of the multiple benefits of physical activity, family sports festivals and group-based physical activity.

**Keywords:** Sports, Social, Physical Health, Mental Health

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## Introduction

Over the past few decades, despite statistics from the World Health Organization, 30 minutes of daily physical activity can significantly reduce the risk of cardiovascular disease, diabetes, hypertension, cancer, and depression (1), but despite the fact that physical activity is an important factor in maintaining and improving physical and mental health and plays an important role in improving the quality of life, but almost 60% The world's adult population is completely inactive or rarely exercises (2). Nowadays, psychologists have come to the conclusion that the existence of sports spaces, although they may be an ideal place for sports and physical activity (3), but what is the tendency or inclination of people to use spaces Sport is influential, related to a person's behavioral domains (4). In order to deal with the negative effects of inactivity, the recognition and contribution of each of the behavioral factors affecting physical activity has been emphasized in recent years by researchers as well as governments. One of the new strategies in this field is to study and focus on social factors (5). Orsgaa, Payne, Moon, Ho, & Gadbi (6) categorized social factors into interpersonal components (including social support, social norms, and social environment). Since physical activity and sports are considered as one of the factors of socialization, it can be stated that the practice and support of family and friends, which are called social support, in the participation of physical activities, It has a direct and significant effect on the socialization of individuals, because by their presence in the field of physical activity, a series of rules and socialization relationships such as striving for a common goal, respecting the laws and rights of others, responsibility, etc. Learn (7). Social support includes actions in the form of material or immaterial actions (money, encouragement, guidance, etc.) by others to facilitate the formation or continuation of a behavior (8). Social support can reinforce behavior through direct and indirect methods. Direct social support is related to having physical activity

together or doing homework to create an opportunity for a person to have physical activity, so that other members can participate in sports activities. Indirect support is defined as activities such as encouraging or talking to a family member or friend to start an exercise program. In other words, in the field of sports, social support can be in the form of tools (providing sports necessities), emotional (seeing the activity or skills of a person by friends and relatives), information (consulting about sports programs) or in the form of Reward (encouragement or reinforcement to learn a new activity or skill) (9). The social norm refers to the level of awareness and belief of the individual and those around him, such as friends and parents, about performing a behavior. For example, people with higher social norms engage in regular, sustained physical activity (10). Eventually, the social environment is lost as social indicators around the person's place of residence, which are related to indicators such as seeing different people while exercising and walking in sports spaces and around the place of residence, communicating and exercising with others (5). In this regard, Xiao, Wang, Zhang and Ren (11) in their research showed that the social support of family and friends has a direct and significant relationship with the amount and intensity of physical activity, leisure activities of the elderly and their health. Yu et al. (12) and Chiang et al. (13) also reported the role of social environment in positive participation in sports participation, physical and mental health of citizens. While Hartman, Barcelona, Trantvin and Hall (14) concluded that only intrapersonal factors predict individuals' physical activity and interpersonal factors such as social support have no effect on increasing or decreasing physical activity. Therefore, based on the findings of the mentioned researches, it seems that examining the relationship between variables such as social factors in strengthening citizens' participation in physical and sports activities in the city, can help to expand the physical activities of different people to fill part of their leisure time. , In creating growth and development of moral,

psychological and physical aspects, cause effective movement in society. On the other hand, knowing that even if the sports environment is inappropriate, interpersonal factors such as support, norm and social environment can be effective in the tendency of people to physical activity (15), therefore, it seems necessary to study and recognize these factors in detail in any society. Therefore, the present study intends to examine the contribution of social factors on sports participation, physical and mental health of Shirazi citizens in the form of structural equation model. It is hoped that the results of this study can provide the necessary background to encourage more citizens to exercise and physical activity.

### Methodology:

The method of the present study was descriptive-correlational and applied in terms of purpose, which was conducted in the field.

The first statistical population included 73 multi-purpose sports halls and artificial turf fields belonging to the Sports and Youth Department of Shiraz city and other government departments. In addition to sports facilities, recreational and sports facilities such as health parks and sidewalks and cycling routes in 11 areas of Shiraz were also among the sites studied. The second statistical population of the study included all people who referred to the mentioned places for physical activity. According to Morgan's table, 60 gyms were selected from the first population and 400 men and women over the age of 18 from the second population as the statistical sample size. Also, among the parks and health spaces, only the places that were at the district and regional scale (urban park) were selected as the places for distributing the questionnaire. To evaluate social factors, a researcher-made questionnaire based on the research of Demister et al. (15) consisting of 11 items was used. Also, physical health was evaluated using the research questionnaire of Voigtländer et al. (16) and Stronegger et al. (17) in the form of six questions and mental health was evaluated in

the form of 9 questions based on the research questionnaire of Proper et al. (18). After reviewing the content validity by the faculty members of the Department of Physical Education and Sports Sciences of Jahrom National and Free University and applying comments and making necessary corrections, all questionnaires were distributed and collected for 60 days in summer and early fall of 1398. Were collected. The questions of the questionnaire were closed-ended and were evaluated based on the Likert scale, from strongly disagree (score=1) to strongly agree (score=5). Also, individuals' sports participation was calculated by multiplying the duration and frequency of physical activity per week.

### Findings

In order to examine the data of the questionnaire, first, descriptive statistics related to the demographic characteristics of the subjects and research variables are presented as below: Most of the statistical samples were women (59.3%) and 40.7% were men with a mean age of 34.69 years and 35.88 years, respectively. The average sports participation of Shirazi citizens was 82.31 minutes per week, and their average physical and mental health were 3.94 and 3.58 minutes per week, respectively. Among the components of social factors, the highest and lowest rates were related to the components of social norm (3.62) and social support (3.46),

In the inferential statistics section, using the PLS method, the fit of the research model has been evaluated in two parts: 1) measurement model and 2) structural model. In the model measurement stage, the reliability and validity of the indices of each structure (variables) were examined using Cronbach's alpha criterion, factor load coefficients, convergent and divergent validity. Values higher than 0.7 and 0.4 are suitable for the internal reliability of convergent validity, respectively. Also, the values of factor load above 0.5 indicate a good correlation between the characteristics of a structure and the relevant structure.

As can be seen in Table 1, the higher Cronbach's alpha coefficients of all research structures (variables) from 0.7 and the factor loads of all indicators from 0.5 indicate the appropriate and acceptable reliability of the research model. Also, according to the obtained values, the convergent validity criterion is also approved.

Table 1. PLS analysis results

variable	Cronbach's alpha	convergent validity
<b>Social factors</b>	0.889	0.474
<b>Mental health</b>	0.9	0.556
<b>Physical health</b>	0.848	0.57
<b>Sports participation</b>	1	1

In the section of fitting the structural model, the existing relationships between the variables have been evaluated using criteria such as significance numbers *t* and coefficient of determination. The coefficient of determination indicates the effect of an exogenous variable (independent) on an endogenous variable (dependent) and values higher than 0.67 indicate a strong coefficient of determination of that structure

all three variables of sports participation (0.675), physical health (0.696) and mental health (0.743) have a strong and acceptable coefficient of determination. Also, if the value of *t*-statistic is greater than 1.96, the accuracy of the relationships between the structures is confirmed at the 95% confidence level. the value of *t*-statistic between each variable was greater than the value of the criterion (1.96), which indicated that the relationship between the research variables is statistically significant.

Considering the path significance coefficients between the research variables, it can be said with 95% confidence that the social factors could directly affect sports participation, physical and mental health of Shirazi citizens

by 82% (0.821), 57% (0.575), and 59% (0.593) respectively. Also, the variable of social factors has an indirect and significant effect on the physical and mental health of Shirazi citizens by 24% (0.821 29 0.295) and 25% (0.821), and 30% (0.305), respectively, through the mediating variable of sports participation.

## Discussion and conclusion

Findings showed that social factors had a direct effect on sports participation, physical and mental health of Shirazi citizens. Also, social factors had an indirect and significant effect on the physical and mental health of Shirazi citizens through the mediating variable of sports participation. This finding with Chiang et al. (13) and Yu et al. (12) on the effect of social environment (seeing people exercising) on physical activity, physical and mental health, Xiao et al. (11), Kolabianchi et al. (19) And Wilk et al. (20), based on the effect of support and social norms on sports orientation and health of consistent individuals. However, it is inconsistent with the results of the research of Hartman et al. (14) on the lack of effect of social support on increasing or decreasing students' leisure sports participation. It is possible that the reason for the discrepancy between this study and the present study is due to differences in the statistical population. Because the statistical population in the research of Hartman et al. (14) are students. In fact, because in educational settings such as universities, students spend most of their time with friends and classmates and even keep in touch with friends to play sports, it is justified that support and the norm Parents' social status does not have a significant effect on students' tendency to exercise outside the educational environment, because they enjoy sports with friends more than their parents. The average findings of the present study showed that Shirazi citizens have low social support from their parents and family for exercising (2.80). But what drives people to do physical activity is social support from friends and relatives. As the average social support of friends confirms that the sports participation of the majority of



Shirazi citizens with their friends. The same is true of social norms or the level of belief and awareness of those around you about exercise. So that the average social norm of friends (3.45) compared to parents and family (2.88) is much higher. But the main reason for the tendency of Shirazi citizens to exercise and physical activity is related to their own belief in having regular physical activity during the week. The average social norm of the individual (4.04) confirms this. In other words, when a person believes that exercise and physical activity should be part of his daily activities, even if he does not have a companion for exercise such as family and friends, there will be no disruption in physical activity. Therefore, due to the fact that among the citizens of Shiraz, there are people who do not have any support from their friends and parents for sports and physical activity, or sometimes social support is reduced, thus to cope with further decline. The level of physical activity of Shirazi citizens should be informed about holding sports competitions in different age groups in each neighborhood, providing sports grounds for family use, such as walking festivals to increase family social support, information Special attention should be paid to the benefits of physical activity through mass media and urban advertisements in order to raise the level of awareness and social norms of citizens and those around them, so that an important and effective step can be taken to develop sports participation and physical and mental health.

## Resources

1. Ekelund, U., Brown, W. J., Steene-Johannessen, J., Fagerland, M. W., Owen, N., Powell, K. E., & Lee, I. M. (2019). Do the associations of sedentary behaviour with cardiovascular disease mortality and cancer mortality differ by physical activity level? A systematic review and

harmonised meta-analysis of data from 850 060 participants. *British journal of sports medicine*, 53(14), 886-894.

2. López-Bueno, R., Sundstrup, E., Vinstrup, J., Casajús, J. A., & Andersen, L. L. (2020). High leisure-time physical activity reduces the risk of long-term sickness absence. *Scandinavian Journal of Medicine & Science in Sports*. First published: 27 January 2020. 1-19.
3. Chow, B. C., McKenzie, T. L., & Sit, C. H. (2016). Public parks in Hong Kong: Characteristics of physical activity areas and their users. *International Journal of Environmental Research and Public Health*, 13(7), 639-654.
4. Hwang, J., & Kim, Y. H. (2017). Psychological, social environmental, and physical environmental variables in explaining physical activity in Korean older adults. *Revista de psicología del deporte*, 26(1), 83-92.
5. X
6. Orsega-Smith, E. M., Payne, L. L., Mowen, A. J., Ho, C. H., & Godbey, G. C. (2007). The role of social support and self-efficacy in shaping the leisure time physical activity of older adults. *Journal of Leisure research*, 39(4), 705-727.
7. Cheng, L. A., Mendonça, G., & Farias Júnior, J. C. D. (2014). Physical activity in adolescents: analysis of the social influence of parents and friends. *Jornal de pediatria*, 90(1), 35-41.
8. Kim, Y. H., & Cardinal, B. J. (2010). Psychosocial correlates of Korean adolescents' physical activity behavior. *Journal of Exercise Science & Fitness*, 8(2), 97-104.
9. Heaney CA, Israel BA (2002). Social networks and social support. In: Glanz K, Lewis F, Rimer BK (Eds.). *Health Behavior and Health Education*:

- Theory, Research, and Practice. Jossey-Bass, San Francisco, pp. 185–209.
10. Van Holle, V., Van Cauwenberg, J., Deforche, B., Van de Weghe, N., De Bourdeaudhuij, I., & Van Dyck, D. (2015). Do psychosocial factors moderate the association between objective neighborhood walkability and older adults' physical activity?. *Health & Place*, 34, 118-125.
  11. Xiao, Y., Wang, H., Zhang, T., & Ren, X. (2019). Psychosocial predictors of physical activity and health-related quality of life among Shanghai working adults. *Health and quality of life outcomes*, 17(1), 72-80.
  12. Yu, R., Wong, M., & Woo, J. (2019). Perceptions of neighborhood environment, sense of community, and self-rated health: an age-friendly city project in Hong Kong. *Journal of urban health*, 96(2), 276-288.
  13. Chiang, C. C., Chiou, S. T., Liao, Y. M., & Liou, Y. M. (2019). The perceived neighborhood environment is associated with health-enhancing physical activity among adults: a cross-sectional survey of 13 townships in Taiwan. *BMC public health*, 19(1), 524.
  14. Hartman, C. L., Barcelona, R. J., Trautvein, N. E., & Hall, S. L. (2019). Well-being and leisure-time physical activity psychosocial factors predict physical activity among university students. *Leisure Studies*, 39(1), 156-164.
  15. De Meester, F., Van Dyck, D., De Bourdeaudhuij, I., Deforche, B., Cardon, G. (2013). Do psychosocial factors moderate the association between neighborhood walkability and adolescents' physical activity?. *Journal of Social Science and Medicine*, 81, 1-9.
  16. Voigtländer, S., Berger, U., & Razum, O. (2010). The impact of regional and neighbourhood deprivation on physical health in Germany: a multilevel study. *BMC Public Health*, 10(1), 403.
  17. Stronegger, W. J., Titze, S., & Oja, P. (2010). Perceived characteristics of the neighborhood and its association with physical activity behavior and self-rated health. *Health & place*, 16(4), 736-743.
  18. Propper, C., Jones, K., Bolster, A., Burgess, S., Johnston, R., & Sarker, R. (2005). Local neighbourhood and mental health: evidence from the UK. *Social science & medicine*, 61(10), 2065-2083.
  19. Colabianchi, N., Clennin, M. N., Dowda, M., McIver, K. L., Dishman, R. K., Porter, D. E., & Pate, R. R. (2019). Moderating effect of the neighbourhood physical activity environment on the relation between psychosocial factors and physical activity in children: a longitudinal study. *J Epidemiol Community Health*, 73(7), 598-604.
  20. Wilk, P., Clark, A. F., Maltby, A., Smith, C., Tucker, P., & Gilliland, J. A. (2019). Examining individual, interpersonal, and environmental influences on children's physical activity levels. *SSM-population health*, 4, 76-85.