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Original Paper

Social Health Status and Its Related Factors in Older Adults

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ABSTRACT

Introduction: For successful aging, it is necessary to evaluate social health as a basic component of the health system. Older adults are an increasingly large proportion who are potential candidates for vulnerability in social health.

Objective: This study aimed to determine social health and its related factors in older adults referred to urban comprehensive health service centers.

Materials and Methods: This cross-sectional study was conducted on 400 older adults referred to urban comprehensive health service centers in Ardabil City, Iran, between February 2021 and April 2022. The multistage sampling method was used to select the older adults. The social health scale for older people was used for data collection. Data were analyzed using an independent t-test, one-way analysis of variance, the Tukey post hoc test, the Pearson correlation coefficient, and linear regression with a stepwise method.

Results: The Mean±SD age of the participants was 69.49±7.16 years. The mean score of social health was 57.27±8.7, and for subscales of social support, social adjustment, and perceived environment resource were 30.16±5.9, 15.15±4.14, and 11.95±2.83, respectively. Multivariate analysis showed that marital status (B=4.68, 95% CI, 2.82%-6.54%, P=0.001), education (B=-2.89, 95% CI, -4.87% to -0.9%, P=0.004), job (B=-2.15, 95% CI, -4.1% to -0.21%, P=0.03), income (B=1.48, 95% CI, 0.63%-2.89%, P=0.04), visiting exhibitions (B=4.69, 95% CI, 2.39%-6.98%, P=0.001), and recreational or fun activities (B=-2.36, 95% CI, -3.99% to -0.72%, P=0.005) were predictors of social health in older adults (R^2=20%).

Conclusion: The social health of older adults is moderate. Our study showed that several factors would influence social health. Healthcare providers should plan necessary interventions to enhance the social health of older adults.

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Highlights

- The world population is aging.
- It is essential to pay attention to the social health of older adults.
- The social health of older adults in any geographical area depends on related factors.
- In our geographical area, the predictors of social health were marriage, high education, sufficient income, visiting exhibitions, and doing recreational activities.

Plain Language Summary

Social health is fundamental to human survival and significantly involves attaining and maintaining older adults' wellbeing. To contribute to older adults, it is necessary to evaluate social health and its related factors. This study showed that the social health of older adults was moderate. Although the older adults had moderate social support and adjustment, their perception of environmental resources was poor. Being married, having higher education, having more income, visiting exhibitions, and having recreational or fun activities were related to improving the social health of older adults.

Introduction

Population aging is becoming a worldwide challenge [1]. Advances in technology and health have led to living longer and dying at an older age. Consequently, after reducing the mortality and fertility rates, the number of older adults in most societies has increased, and the population is aging. It is expected that other countries experience this phenomenon in the future. After the last census, the results of the forecasts showed that with any possible scenario, Iran would face population aging [2]. In aging, there are challenges such as loneliness [3], changing relationships and social roles [4], chronic illness, and the death of spouses and friends [5]. These factors can threaten the quality of life (QoL) [6]. The literature shows that social health in older adults is related to social support [7], self-care behaviors [8], social adaptation, QoL [6], and the mortality of older adults [9, 10]. Therefore, it is important to pay attention to the social health of older adults [11].

Social health is one of the dimensions of health that refers to the quantity and quality of an individual's engagement with the community to promote individual welfare and the welfare of the population [12]. The level of social health has been evaluated in young age groups, but scholars state that the indicators of social health in older adults are different from those in younger people [13]. In addition, the evidence reveals that social health factors vary in every geographic region. For example, a study in China showed that social health in older adults was related to marital status [14]; however, marital status had not associated with social health in the Iranian population [15]. Moreover, the role of gender [10, 14] and education status is also reported differently [14].

The world population is aging. Like other countries, Iran is also facing population aging [2]. Certainly, aging will have consequences that can be considered. If it is associated with the key factor "health," it will be an opportunity; otherwise, it will be a threat [16].

Evaluating social health and its related factor in older adults can provide valuable information to geriatric nurses and health policymakers to provide appropriate interventions to improve the social health of the elderly population [17]. Moreover, the literature review and the results of existing studies indicate no single and specific pattern in the field of social health and related factors among older people. This condition may be due to the use of a non-specific index. This study aimed to measure the social health status of older adults and its related factors using a specific social health scale for the elderly in Ardabil City, Iran.

Materials and Methods

This research is a cross-sectional study of randomly selected older adults aged 60 years or older living at home. The sample was selected from older adults with a file in urban comprehensive health service centers

in Ardabil, Iran. Multistage sampling was used for the selection of participants. Ardebil has 69 urban comprehensive health centers. First, 25% of centers (n=17) were selected based on simple random sampling. Next, the number of samples in each center was selected according to the total number of covered older adults by simple random method. The sample size was calculated at 376 based on α=0.05, d=0.9, and Mean±SD score of 47.25±8.91 according to the social health score of the older adults in a similar study [18]. Then, considering a 10% attrition rate, 413 older adults were recruited for the study. The inclusion criteria were being 60 years and older, having an electronic health record in urban comprehensive health service centers, having no cognitive disturbance (score 8 and above) based on the abbreviated mental test (AMT), having the ability to speak, and having no severe physical disability.

The data were collected using a demographic information questionnaire, social health scale for the elderly (SHSE), and AMT. The demographic information questionnaire includes variables of age, sex, marital status, income, job status, education level, underlying medical conditions, regular exercise (yes/no), membership in groups and clubs (yes/no), having recreational or fun activities (per week) and visiting exhibitions (yes/no). The qualitative content validity of the questionnaire was confirmed by 6 faculty members of the Nursing and Midwifery School in Kashan City, Iran.

Bao et al. developed the SHSE [19]. It has 25 items, and 3 subscales include social support (items 1-12), social adjustment (items 13-18), and perceived environment resource (items 19-25). The scoring is based on a 5-point Likert-type scale from 1 to 5. The total score ranges from 25 to 125; a higher score indicates greater social health. The SHSE has been translated and psychometric in Iran [20]. In the present study, Cronbach α was estimated to be 0.76. The Cronbach α values for the subscale of social support, social adjustment, and perceived environment resource were 0.91, 0.71, and 0.70, respectively.

The participants' cognitive status was evaluated with the Farsi version of the AMT. This scale has 10 items, and a score of 8 or higher indicates no cognitive impairment in older adults [21]. The cognitive status of the older adults was evaluated before completing the questionnaires.

The questionnaires were provided to the participants in urban comprehensive health service centers for completion between February 2021 and April 2022. The researcher read the questionnaire items and recorded their answers for illiterate participants.

Data analysis was done using SPSS software, version 16 (SPSS Inc., Chicago, IL, USA). The normality of the data distribution was determined using the Kolmogorov-Smirnov test. Univariate analysis was performed using the independent t-test, one-way analysis of variance (ANOVA), the Tukey post hoc test, and the Pearson correlation coefficient. In the multivariable analysis, linear regression with the stepwise method was used, and variables were entered into the model with P≤0.2. Before running the multiple regression analysis, the categorical variables were converted to dummy variables to represent subgroups of the samples. The subgroups were coded as 0, 1, 2, and so on. A P<0.05 was considered for the significance level of the test.

Results

Of 413 questionnaires, 400 participants (96.9%) completed the questionnaires. The Mean±SD age of the participants was 69.49±7.16 years, ranging from 60 to 100 years. The characteristics of the participants are summarized in Table 1.

The t-test showed that the mean social health score was significantly higher in married older adults (P=0.001) and with sufficient income (P=0.001).

ANOVA and the Tukey post hoc test showed that the mean social health scores were significantly higher in retired older adults (P=0.001), those with recreational or fun activities (P=0.001), and literate older adults. The social health scores were not significantly different regarding gender, underlying medical conditions, regular exercise, and membership in associations and clubs (Table 1).

The Mean±SD scores were 57.27±8.7 (range: 36-86) for total social health, 30.16±5.9 (range: 12-48) for the subscale of social support, 15.15±4.14 (range: 6-28) for the social adjustment, and 11.95±2.83 (range: 7-22) for the perceived environment resource. The findings showed that age significantly and negatively correlated with social health (r=-0.2, P=0.001) in older adults based on the Pearson correlation test.

In the final stage, the variables with a P≤0.2 were entered into the regression model. The linear regression model with the stepwise method showed that being married (P=0.001), illiteracy (P=0.004), self-employee (P=0.03), sufficient income (P=0.04), visiting exhibitions (P=0.001), and having rarely recreational or fun activities (P=0.005) were significantly associated with the social health in older adults. These factors explain 21% of the variance in social health (Table 2).

Table 1. Comparison of the mean of with social health based on participants' characteristics

Variables		No. (%)	Mean±SD	P
Gender	Female	211(52.8)	56.76±8.62	0.22*
	Man	189(47.3)	47.84±8.78	
Marital status	Lonely (widowed, divorced)	105(26.3)	52.8±8.11	0.001*
	Married	295(73.8)	58.86±8.36	
Income	Sufficient	251(62.7)	58.44±8.75	0.001*
	Insufficient	149(37.3)	55.3±8.28	
Job status	Retired	137(34.3)	59.83±9.1	0.001**
	Self-employee	83(20.8)	55.81±7.8	
	Housekeeper	180(45)	55.98±8.4	
Education level	Illiterate	81(45)	53.38±7.95	0.001**
	Less than diploma	163(40.8)	57.42±8.03	
	Diploma	110(27.5)	57.61±8.52	
	University	46(11.5)	62.76±9.6	
Underlying medical conditions	Yes	238(59.5)	56.8±8.8	0.18*
	No	162(40.5)	57.96±8.54	
Regular exercise	Yes	73(18.3)	57.69±8.14	0.64*
	No	327(81.7)	57.17±8.84	
Membership in groups and club	Yes	30(7.5)	59.16±10.44	0.22*
	No	370(92.5)	57.11±8.55	
Visiting the exhibition	Yes	58(14.5)	62.98±8.1	0.001*
	No	342(85.5)	56.3±8.43	
Having recreational or fun activities	Rarely	290(52.3)	55.11±8.59	0.001**
	Sometimes	131(32.8)	58.84±8.27	
	Mostly	46(11.5)	60.19±7.57	
	Always	14(3.5)	65.14±8.17	

*The Independent sample t-test, **One-way ANOVA.

Discussion

The study showed that most of our participants had moderate social health, which may be attributed to economic poverty and the low education level among older adults in Iranian society. A previous study in Iran found moderate social health levels among older adults [18]. Another study in Iran found that social health was unfavorable among citizens [12]. Another study in Iran found that social health was unfavorable among citizens [12]. The differences might be attributed to the different study participants or instruments used. In the present study, all participants were older adults.

Our study results showed social health was lower in self-employed older adults. Scholars believe employ-

Table 2. Results of the adjusted multiple linear regression of factors associated with social health

Model	Unstandardized Coefficients		t	P	95% CI	
	B	SE			Lower	Upper
Constant	62.21	2.97	20.92	0.001	-	
Married	4.68	0.96	4.95	0.001	2.82	6.54
Visit the exhibition (yes)	4.69	1.17	4.02	0.001	2.39	6.98
Having recreational or fun activities (rarely)	-2.36	0.834	-2.83	0.005	-3.99	-0.72
Education (illiterate)	-2.89	1.01	-2.86	0.004	-4.87	-0.9
Job (self-employee)	-2.15	0.99	-2.18	0.03	-4.09	-0.21
Income (sufficient)	1.48	0.72	2.05	0.04	-0.06	2.89
R=0.46				Adjusted R^2=0.21		

ment is related to social coherence, social contribution, and social health [22]. Social health may vary between job characteristics and depends on the physical strain imposed by the occupation, autonomy in job tasks, and organization structure [23]. Social health seems to have close relationships with individual lifestyles, socioeconomic status, and personality factors. Understanding these factors can help policymakers look for interventions to enhance social health among older adults.

The present study showed that social health was lower in older people who rarely had recreational or fun activities. Recreation activities for older adults provide longstanding advantages. Older adults can gain social support, a sense of belonging, and fulfillment when participating in group recreational or leisure activities [24]. These activities can improve the social interactions of older adults to reduce anxiety by communicating with relatives and friends [25] and enhance their positive emotions [26], leading to a more positive and optimistic attitude toward life [27]. The older adult population is quite diverse, with different interests and abilities. Recreational activities provide opportunities for socializing, using skills and talents developed throughout their lifetime, and learning new skills. However, some older adults may not be aware of the potential positive values of recreation.

In the present study, social health was higher in married older adults than those who lived alone. Widows' mental, social, behavioral, and physical conditions are worse than those who are married [28]. A study in Iran showed that older adults living with their spouses or families have better social health [29]. The spouse seems to be the most important source of social support for couples, and social communication and feeling of intimacy and security are more in married elderly people.

In the study, the social health of older adults with sufficient income was higher than those with insufficient income, which aligns with other studies [29, 30]. People with higher incomes have access to more resources and facilities, which affects their social health.

In this study, social health was not associated with regular sports activities. Meanwhile, social health was higher in older adults who had recreational activities. A study in Iran showed that 61.5% of people who exercised and 50% who read books had a low social health score [29]. Scholars believe that recreational and entertaining activities in free time improve individual and physical abilities and promote a person's social growth [29, 31]. Maybe the reason that regular exercise is not related to social health in the present study is related to the type of exercise and the time allocated to it by older adults.

The results of the present study showed that older adults who visited exhibitions had higher social health than those who did not. It seems that visiting the exhibitions creates a connection with others and feelings of happiness and vitality in older adults; it can be associated with an increase in the social health of older adults. A study showed that people with low communication skills had low social health [29]. Schneider et al. believe that visiting exhibitions, going to the cinema, having friendly gatherings, etc. is an important communication tools between humans and the environment [32].

Our study showed that social health was lower in illiterate older adults. These results are consistent with the findings of other studies [33, 34]. Education plays an important role in belonging to society. Literate people consider themselves valuable community members and try to improve the quality of their interpersonal relationships with related social groups [35]. Scholars believe education is closely associated with physical, mental, and social health. Higher literacy improves economic conditions and more access to social and psychological resources, such as self-control, social support, and a healthy lifestyle [36].

Social health was unfavorable in older adults and was associated with individual, cultural, economic, and environmental factors. Therefore, policymakers should consider these factors in plans to promote social health. In addition, it is necessary to conduct studies in other urban and rural areas to determine factors related to social health.

The results of this study must be interpreted with caution, as the participants' sociodemographic characteristics may have influenced the study results. The sample selected for analysis may not accurately reflect the target population. Moreover, participants in the study may also be significantly different from older adults living in other cities of Iran or countries worldwide, limiting the generalizability of the study's findings. As a cross-sectional study, this research is limited as the association is determined between the variables that do not imply causation.

Ethical Considerations

Compliance with ethical guidelines

The Ethics Committee of Kashan University of Medical Sciences approved the study (No.: IR.KAUMS.NUHEPM.REC.1400.005). The researcher introduced himself to the participants, explained the study objectives, and assured them that their information would remain confidential. They can withdraw from the study at any time. Then the participants signed a written consent form to participate in the study.

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Authors' contributions

Study design and funding administration: Fatemeh Sadadt Izadi-Avanji and Rasoul Mohseni-Asl; Developing the analytical plan: Hamidreza Gilasi; Preparing the final draft of the manuscript: Fatemeh Sadat Izadi-Avanji; Data analysis and revising the manuscript: All authors,

Conflict of interest

The authors declared no conflict of interest.

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