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Original Article

Investigating the Perceived Social Support in Aging and Its Related Factors in the Elderly of Neyshabur, Iran

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Abstract

Background: One of the most important stages of human life is the aging period, which is associated with many challenges and developments. Therefore, it is necessary to pay special heed to the physical and psychological conditions of the elderly. The aim of this study was to investigate the perceived social support (PSS) and its related factors in the elderly in Neyshabur in 2023.

Methods: In this cross-sectional study, 481 elderly people referred to comprehensive health services centers in Neyshabur city in 2023 were enrolled in the study by stratified random sampling. Data collection was done using demographic questionnaires and the Multidimensional Scale of Perceived Social Support (MSPSS). To investigate the relationship between demographic variables and PSS score, univariate analysis and multiple linear regression analysis were used in SPSS version 16.0.

Results: The mean (±SD) age of the participants in this study was 68.89±7.32 years. Additionally, the mean (±SD) score of PSS was 54.35±20.68. Most of the participants (44.9%) had a moderate level of PSS. Based on the results of multiple linear regression analysis, there was only a statistically significant relationship between PSS level and anxiety (B=-0.411, $P<0.001$).

Conclusion: The findings of this study indicated that the PSS level of most of the elderly was moderate. Therefore, it is recommended that policymakers in the field of aging focus on mental factors in the elderly and their families in order to make policies and provide better services to improve their PSS.

Keywords: Social support, Health, Aged, Health services

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Introduction

With the improvement of health indicators in the world and the consequent increase in life expectancy, the older adult population is increasing; therefore, it is predicted that in the coming years, the increase in the older adult population will be followed more rapidly. Aging, as the last stage of human development, is a distinct experience and an inevitable process that is associated with physical challenges and changes (1,2). In Iran, by comparing the population pyramid over the past decades, it can be concluded that the elderly population will increase rapidly in the coming decades (2). The aging rate of the population in Iran is expected to reach 31% of the total population in 2050 (3). Therefore, appropriate health and treatment plans should be prepared and implemented for this age group (4). Aging, as the last stage of human development, is a distinct experience and an inevitable process that is associated with physical challenges and changes, such as an increased risk of diseases, and psychological challenges such as loneliness and isolation (2). On the other hand, the elderly facing these challenges that affect their lives need adequate support from others (4). Perceived social support (PSS) is people's perception of the level of support provided by social networks (5).

PSS means understanding the support of others and having a reliable network in times of need, especially in times of crisis. The greater the PSS from others, the greater the social health of individuals (6). Social support can help older adults reduce anxiety and stress by creating a sense of belonging and receiving attention and support from others, such as family members and friends (7). One's perception of the support is more crucial than the actual

amount of support received; in other words, the notion and mindset of the individual regarding the assistance obtained is more influential than the quantity of assistance provided to them (8). Social support plays an important and vital role in all aspects of human health, quality of life, and life satisfaction (9). In a study conducted in Iran, most of the elderly had a medium level of PSS (10). PSS helps the elderly reduce anxiety and stress by creating a sense of belonging, receiving attention, and support from others, such as family members and friends, thus improving health and well-being resulting from better sleep and better digestive status (7,10-13). According to the results of previous studies, PSS is associated with age, income, experience of financial pressure, exposure to abuse and psychological trauma, loneliness, depression, socioeconomic status, duration of physical loneliness, self-confidence, and stress (14-16). The sensitivity of mental problems and the vulnerability of the age group, the change in family structure from extended to nuclear, and the prevalence of mechanized life have required the elderly to shoulder the burden of their lives fully. It is hoped that by conducting this study, it will be possible to identify the perceived amount of social support and relevant common factors to select the best strategies to improve the physical and psychological conditions of the elderly. Therefore, the present study was conducted with the aim of investigating the PSS and its related factors in the elderly.

Materials and Methods

This cross-sectional study was conducted on 481 elderly people referred to Comprehensive Health Services Centers (UCHSCs) in Neyshabur in 2023. Sample size was estimated using G.Power software version 3.1.9.2. Considering the first type error of 0.05, a test power of 0.95, and a small effect size of 0.2 according to Cohen's guide (17), the sample size was estimated to be 436 people, which was increased to 481 people by taking into account a 10% drop-out rate. Stratified random sampling was performed and the sample size taken from each stratum was proportional to the size of the strata. Neyshabur has eight UCHSCs. In this way, each of the eight UCHSCs in Neyshabur was considered as a cluster, and according to the population of older adults covered by each center (cluster) and the size of the sample, the cases were selected from older adults referring to health centers for a particular service. For data collection, the researchers attended the comprehensive health services centers in Neyshabur. Then, the samples were selected from the elderly who referred to the comprehensive health centers to receive health services based on the inclusion and exclusion criteria of the study. The inclusion criteria were being 60 years and above, living in Neyshabur, having a health record, having the ability to understand and speak Persian, providing informed written consent to take part in the study, and not having a disabling physical or mental illness that causes an inability to participate in the study. The exclusion criterion was unwillingness to participate in the study. The study was conducted after explaining the objectives of the study and emphasizing the confidentiality of the information. It should be noted that the questionnaires were completed through interviews.

Measures

The samples completed a two-part tool that included demographic information and the Multidimensional Scale of Perceived Social Support (MSPSS). The demographic information included age, gender, education level, employment, living status (to live with), number of children, history of drug use, Wealth Index (WI), anxiety status, and amount of physical activity (minutes per week). The WI is a composite measure of the cumulative living standard of a household. It is calculated using data on a household's ownership of a selected set of assets, including televisions, bicycles, and cars, materials used for housing construction, including floor material, type of drinking water source, and restroom and sanitation facilities. The WI considers characteristics that can be associated with wealth status, avoiding variables that do not constitute an asset or outcome variables. In order to calculate the WI as a composite scale of the cumulative standard of living of the elderly, data on the ownership of assets of the elderly were collected, and principal component analysis was used. Finally, people were ranked from the poorest to the richest according to the amount of their wealth (not income) (18).

Multidimensional Scale of Perceived Social Support

This scale is a 12-item questionnaire designed to assess PSS from three sources: friends, family, and important people in life. Each item in the questionnaire is scored on a 7-point Likert scale, ranging from completely disagree (score: 1) to completely agree (score: 7). In order to determine the total score of this scale, the scores of all items are summed and divided by the number of items. The highest score is 7 and the lowest score is 1. In general, a score of 1 to 3 is considered low PSS, a score of 3 to 5 is considered moderate PSS, and a score of 5 to 7 is considered high PSS (19). Sadri et al conducted a study in Iran and assessed the reliability of this questionnaire using the internal consistency method (0.91), and they confirmed its validity as well (20).

Data Analysis

Data analysis was performed using SPSS version 16.0. Descriptive statistics such as mean (± standard deviation) were used for quantitative variables, and frequency and percentage were used for qualitative variables. Before performing parametric tests, the normality of data distribution was investigated by the Kolmogorov-Smirnov test. Then, to compare the means of the two independent groups, an independent *t* test was used. Additionally, analysis of variance was used to compare the means of more than two groups, and multiple linear regression was used to investigate the relationship between the dependent

variable and independent variables. The appropriate statistical test was selected based on the type of variables and their measurement levels. All analyses were performed at a significance level of 0.05.

Results

The mean age of the participants in this study was 68.89 ± 7.32 years. Most of the participants (50.7%) were female. In terms of employment, 43.5% were unemployed. In terms of marital status, 66.5% of the elderly were married. Moreover, most of the participants (74.6%) had a history of drug use (Table 1).

The results of the present study showed that various factors like gender, employment status, marital status, education level, lifestyle, physical activity, and economic status affect the level of PSS. Overall, men, employed and retired people, married people, people with higher education, people who live with their spouses, people who are more physically active, and wealthier people reported higher PSS scores. These findings suggest that demographic and socioeconomic factors play an important role in people's perceptions of social support. The mean PSS score of the participants was 54.35 ± 20.68. Most of the elderly (44.9%) had a moderate PSS level, 36.6% had a high PSS level, and 18.5% had a low PSS level.

The variables that showed a statistically significant relationship with the dependent variable at the 95% confidence level in univariate analysis (Table 1) were entered as predictors in the multiple regression model. For further analysis, the variable of drug use with a significant level of 0.137 was also considered in the final model. The results of multiple linear regression analysis (Table 2) showed that while demographic variables such as gender, employment status, marital status, education level, medication use, living status, physical activity, and wealth index did not show a significant relationship with PSS scores, high levels of anxiety were significantly associated with lower PSS scores (B = -0.411, $P < 0.001$). Overall, for every unit increase in the anxiety score, the PSS score of the individuals decreased by an average of 0.41 points (Table 3).

Table 1. Demographic Characteristics of Participants, n = 481

Variable	Category	Mean ± SD or N (%)
Age, year		68.89 ± 7.32
Gender	Female	244 (50.7%)
	Male	237 (49.3%)
Employment status	Employee	5 (1%)
	Retired	134 (27.9%)
	Self-employment	133 (27.7%)
	Unemployment	209 (43.5%)
Marital status	Single	15 (3.1%)
	Married	320 (66.5%)
	Divorced	6 (1.2%)
	Widowed	140 (29.1%)
Education level	Illiterate	236 (49.1%)
	Elementary	149 (31%)
	Secondary	26 (5.4%)
	High school	41 (8.5%)
	Academic	29 (6%)
History of drug use	No	417 (86.7%)
	Yes	64 (13.3%)
Current drug use	No	437 (90.9%)
	Yes	44 (9.1%)
Living status	Wife	308 (64.0%)
	Children	63 (13.1%)
	Alone	110 (22.9%)
History of taking medicine	No	122 (25.4%)
	Yes	359 (74.6%)
Number of children		4.75 ± 2.24
Physical activity per week (min)		328.17 ± 418.0
Wealth index	Poorest	96 (20%)
	Poorer	96 (20%)
	Middle	94 (19.5%)
	Richer	99 (20.6%)
	Richest	96 (20%)

SD: Standard deviation.

Discussion

The aim of this study was to investigate the PSS and its related factors in the elderly. One of the important results of the present study was that most of the elderly (44.9%) had a moderate PSS level, and the mean PSS score was 54.35. In the study conducted by Ahmadi et al in 2019 (21), the mean score of PSS was reported to be 83.8354, which is in line with the findings of the present study. In the study conducted by Zolfaghari et al in 2024 (22), the mean score of PSS was reported to be 61.27, which is in line with the findings of the present study. Bakhtiari et al conducted a study in 2017 (9) and obtained a mean PSS score of 42.71, which is inconsistent with the results of the present study. Additionally, in a study conducted by Seifzadeh et al in 2020 (23), the mean score of social support was reported to be 46.95, which is not in line with the results of the present study. In the study performed by Sadegh Moghaddam et al (10) in 2016, the mean score of PSS was 27.47, which is inconsistent with the results of the present study. It seems that in the aforementioned studies, the sample size, sampling method, and characteristics of the elderly participants in the study in terms of inclusion and exclusion criteria account for the differences with the results of the present study. PSS is one of the most important forms of social relations and is influenced by the perception of the individual about it, as well as the need for it, which can vary according to age, gender, personality, and even culture. On the other hand, at every stage of human life, some aspects of support may become important and have more effects than other dimensions (24). Based on the findings of the present study, it can be concluded that PSS in the elderly should be considered an important issue

Table 2. Relationship Between PSS Scores and Demographic and Socioeconomic Characteristics

Variable	Category	Mean ± SD	*P*-value
Age, year	≥70	54.44 ± 21.40	0.886[a]
	>70	54.16 ± 19.22	
Gender	Female	51.95 ± 21.56	0.010[a]
	Male	56.81 ± 19.48	
Employment status	Employee	58.40 ± 6.58	0.002[b]
	Retired	58.65 ± 17.93	
	Self-employment	56.02 ± 22.18	
	Unemployment	50.43 ± 20.95	
Marital status	Single	43.87 ± 19.38	0.002[b]
	Married	56.62 ± 20.35	
	Divorced	62.17 ± 22.38	
	Widowed	49.95 ± 20.61	
Education level	Illiterate	51.59 ± 21.42	0.013[b]
	Elementary	55.03 ± 21.30	
	Secondary	58.77 ± 14.32	
	High school	58.81 ± 18.78	
	Academic	63.03 ± 14.21	
History of drug use	No	54.01 ± 20.78	0.358[a]
	Yes	56.56 ± 20.02	
Current drug use	No	53.90 ± 20.76	0.137[a]
	Yes	58.77 ± 19.51	
Living status	Wife	56.88 ± 20.31	<0.001[b]
	Children	52.05 ± 19.67	
	Alone	48.58 ± 20.68	
History of taking medicine	No	54.59 ± 20.69	0.881[a]
	Yes	54.26 ± 20.70	
Number of children	≥4	54.91 ± 20.58	0.559[a]
	>4	53.80 ± 20.80	
Physical activity per week (minute)	≥150	50.72 ± 20.80	0.001[a]
	>150	56.89 ± 20.25	
Wealth index	Poorest	49.20 ± 20.86	0.040[b]
	Poorer	52.76 ± 21.58	
	Middle	56.11 ± 20.76	
	Rich	56.92 ± 21.25	
	Richest	56.71 ± 18.09	

SD, standard deviation.
[a] *P* value obtained from independent *t* test.
[b] *P* value obtained from one-way ANOVA test.

Table 3. Relationship between Demographic Characteristics and PSS Scores Using Multiple Linear Regression Analysis

Variable	B	SE	*P*-value
Gender = female	1	-	-
Gender = male	-3.097	2.917	.289
Job = employee	1	-	-
Job = retired	-1.055	9.608	.913
Job = free	-3.700	9.851	.707
Job = unemployed	-5.514	10.033	.583
Marital status = single	1	-	-
Marital status = married	7.031	6.646	.291
Marital status = divorced	15.241	9.901	.124
Marital status = widowed	7.568	5.713	.186
Education = illiterate	1	-	-
Education = elementary	1.057	2.282	.643
Education = secondary	4.464	4.482	.320
Education = high school	2.676	3.889	.492
Education = university	6.970	4.880	.154
Drug use at present = no	1	-	-
Drug use at present = yes	5.003	3.385	.140
Living status = with wife	1	-	-
Living status = with children	-3.684	4.901	.453
Living status = alone	-4.999	4.968	.315
PA ≤ 150 min/per week	1	-	-
PA > 150 min/per week	2.519	2.049	.220
WI level = poorest	1	-	-
WI level = poorer	2.142	3.044	.482
WI level = middle	4.565	3.102	.142
WI level = richer	2.980	3.260	.361
WI level = richest	.948	3.500	.787
Anxiety	-.411	.107	<.001

SE: standard error; B: unstandardized coefficient; β: standardized coefficient.

and that health policymakers should consider this issue when examining, diagnosing, or improving the problems of the elderly. Additionally, the results of the present study indicated a relationship between PSS and physical activity in the elderly. In other words, for every hour of increased physical activity, the PSS score increased by an average of 0.3 points in the elderly. This is consistent with the findings reported by Soltani et al in 2015 (25), Borji and Motaghi in 2016 (26), and Huang et al in 2015 (27). The results of the study conducted by Seifzadeh et al in 2018 (23) are not in line with the results of the present study. It can be concluded that social support and physical activity somehow affect the quality of life of an individual; therefore, low physical activity and low social support in the elderly can result in failure in treatment and hospitalization. Another important result of the present study was that PSS in the elderly was associated with anxiety. In other words, higher levels of anxiety were significantly associated with lower PSS scores. This is consistent with the findings of the study conducted by Antonietti et al in 2020 (28), as well as Zolfaghari et al in 2024 (22), showing that PSS has a significant relationship with anxiety, depression, and self-esteem, which is in line with the outcome of the present study. Denche et al conducted a study in 2022 (29) and reported that high PSS was associated with less psychological distress in the elderly. In 2023, Hafeez and Hafeez (30) showed that PSS had an inverse effect on the level of anxiety in the elderly. Therefore, these findings suggest that anxiety among older adults should be prioritized and that health policymakers should take this issue seriously and continuously examine

the support needs of older adults in terms of quality and quantity. They should take steps to improve the mental health of older adults by utilizing the support resources available in society and encouraging family support.

The present study had some limitations as well. First, this study was conducted based on information obtained from the elderly using a questionnaire. Second, the fatigue and low literacy of the elderly to complete the questionnaire may have affected their responses. Third, due to the nature of the present study, it is suggested that further studies should be conducted examining causal relationships. Since the present study is a cross-sectional study and only examines the relationship between variables, future studies should be conducted to detect and confirm the relationship between PSS and cultural and social factors related to social support for older people.

Conclusion

The findings of this study indicated that the PSS level of most of the elderly was moderate, and a low PSS level was significantly associated with a high level of anxiety. Therefore, it is recommended that policymakers and planners in the field of aging focus on physical and mental factors in the elderly and their families in order to make policies and provide better and more services in UCHSCs to improve their PSS.

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Competing Interests

The authors declare that they have no conflict of interests.

Ethical Approval

This study was approved by the Ethics Committee of Neyshabur University of Medical Sciences (IR.NUMS.REC.1402.003).

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