Original Paper

Association Between Perceived Social Support and Mental Health Status Among Older Adults

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ABSTRACT

Introduction: The elderly need social support to reduce their physical and mental disabilities. Perceived social support is one of the effective factors in the lifestyle of older adults.

Objective: This study aimed to determine the association between perceived social support and mental health status among older adults.

Materials and Methods: This research is a cross-sectional analytical study. The study data were collected using a Perceived Social Support (PSS) scale and general health questionnaire-12 (GHQ-12). A total of 302 eligible older adults were selected through a random sampling method from primary health centers in the north, south, east, west, and center of Tehran. The inclusion criteria were those community-dwelling older adults aged ≥60 years and with normal cognitive abilities. The collected data were analyzed using t test, ANOVA, the Pearson correlation, and multiple linear regressions.

Results: The Mean±SD age of older adults was 70.01±6.29 years. Their Mean±SD scores of the PSS and GHQ-12 were 130.95±16.05 and 7.29±5.55, respectively. The results showed no significant relationship between demographic variables and PSS. There was a significant inverse correlation between the PSS score and the GHQ-12 score (P= 0.01, r= -0.878). The PSS explained 0.66 of the total variances of "positively phrased items" of GHQ-12 (adjusted R^2= 0.66) and 0.76 of the total variances of "negatively phrased items" of GHQ-12 (adjusted R^2= 0.76).

Conclusion: Our findings showed that the PSS and mental health are at a desirable level in this study, and the PSS is not affected by demographic variables. The PSS is a promoting factor for mental health status among older adults.

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Highlights

- The Perceived Social Support (PSS) assessment is above average among older adults.
- Our findings revealed that community-dwelling older adults in this study have a good mental health status.
- There is a correlation between perceived social support and mental health.
- There was no significant relationship between demographic variables and perceived social support.

Plain Language Summary

This study aimed to assess the effect of Perceived Social Support (PSS) on the mental health status of older adults. Social support is accessible support provided through individuals. Social support decreases social isolation. Also, people with high social support are more likely to use the active coping mechanism. The PSS is more critical than received support because of the changes in expectations and needs in older adults. PSS hugely depends on cultural norms. The impact of social support on mental health in Iran has not been studied. The results demonstrated that the mean of elderlies' PSS is above average and Iranian community-dwelling older adults have a good mental health status. This study reveals that the PSS plays an essential role in improving the mental health of older adults. Also, older adults who are married, retired, and educated reported a higher level of PSS. Considering the social and cultural changes in the traditional family structure in Iran, it is essential to develop more formal supportive services to maintain older adults' social support and decrease the risk of loneliness.

Introduction

Aging can influence all aspects of human life, including its social dimension. One of the social dimensions that change with age is social support. This change is due to life events such as retirement, isolation, relocation of residence, and losses [1]. Social support is the accessible support provided through individuals (e.g., family and friends) and social groups. Social support includes structural (e.g., number of social interactions), emotional (e.g., empathetic support), and practical (e.g., financial support) dimensions [2].

The Perceived Social Support (PSS) is more important than received support because of the changes in expectations and needs in older adults [3]. The literature review shows that social support reduces social isolation. Also, people with high social support are more likely to use active coping mechanisms [4]. Therefore, a high level of PSS improves physical and well-being and acts as a precursor to successful aging. Thus, assessing the PSS is an essential part of the comprehensive geriatric assessment [5].

Numerous studies have shown that the PSS hugely depends on cultural norms [6, 7]. People from different cultural backgrounds but with similar support networks tend to be differently influenced by social support and have different support expectations and perceived benefits [8]. For example, in a family-centered culture, the older adult's perception of support is typically shaped by the pivotal role played by family bonds and the duty to caring for seniors in extended family households [9]. Older adults have to rely on informal support networks due to the lack of formal support structures [10].

The rapid increase of older adults' population in the world [11], together with a significant decline of the fertility rate, growing urbanization, decreased family size, and change of intergenerational communications, could limit the extent of their received supports and consequently perception of support [12]. Although Iran's social culture is collectivist, the impact of social support on mental health has not been studied in Iran so far. Collectivist culture does not necessarily mean more social support; in fact, the data indicate that social capital has declined in Iran [13]. These two components conflict with each other. It is necessary to identify this effect with culture-based tools. Despite several studies on the PSS and its relationship to health, most published studies have been conducted based on western cultural industrialized countries. For example, Ahmed-Mohamed et al. assessed the PSS of older adults in Spain using the Duke-UNC functional social support questionnaire.

They found that 35% of Spanish older adults considered their emotional PSS insufficient that was due to a sense of loneliness [14]. Mclaughlin et al. reported that a high level of social support and better self-rated health are correlated among Australian older adults [15].

However, to use an instrument in a different context from the one for which it was initially designed, it is necessary to consider the culture, language, and geographical location of the relevant context. For instance, words have different meanings in different cultures and cannot be translated into other languages. Therefore, the PSS assessment scales cannot be assumed to have the same functions in different cultures through their mere translation. To respond to such a need, researchers in China and India have assessed the PSS with scales designed and specific to their own cultures [16, 17].

Regarding Iranian culture and society, the PSS should be readjusted too. Considering the novice field of studies on social supports among older adults and the need to have a contextual understanding of the PSS, this study was conducted to evaluate the association between PSS and mental health status among older adults in Tehran City, Iran, in 2018.

Materials and Methods

This research is a cross-sectional analytical study. A total of 302 older people were included in this study by random sampling method from primary health centers in Tehran in 2018. Three centers were selected from each of the southern, northern, western, eastern, and central parts of Tehran. The random sampling method was performed from the list of older adults covered by these centers. Next, 400 older adults were called to get the sample size (302 older people). The inclusion criteria consisted of aged older than 60 years, with normal cognitive abilities and willingness to take part in the study. Based on the Green sample size determination formula for regression studies: N≥8k+50 [18]. K was the number of independent variables and considered 34. Therefore the sample size was 322. Only 302 people completed the questionnaire out of the total sample size.

The sociodemographic questionnaire, the PSS scale, and the general health questionnaire-12 (GHQ-12) were used in this study. The sociodemographic questionnaire contained information about gender, marital status, education, living arrangements, housing status, and source of income of older adults.

PSS scale is a 34-item (31 positives and 3 negatives) questionnaire, consisting of five subscales of "emotional support" (16 items), "practical support" (7 items), "spiritual support" (5 items), "satisfaction of received support" (3 items), and "negative interactions" (3 items). They were scored on a 5-point Likert-type scale from "5=very much" to "1=very little" (inversed in negative items). The total score of the PSS ranged from 34 to 170 with an average of 104 (each subscale could be rated separately). The scale is developed through exploratory mix-method research and Iranian older adults' viewpoints about the PSS. The structural validity by exploratory factor analysis showed that these five factors could explain 58% of the total variance of the scale. The Cronbach α value of this scale was calculated as 0.92 [10].

The GHQ-12 is a self-report measure of mental health in community settings and comprises 6 items expressing positive descriptions of mood states (e.g., "felt able to overcome difficulties") and six items expressing negative descriptions of mood states (e.g., "felt like a worthless person"). For brevity, these items will be referred to as "negatively phrased items" and "positively phrased items", which are scored using a 4-point Likert-type scale ranging from 0 to 3 (maximum score 36). Higher scores indicate a greater probability of psychological disorder [19]. The scale is an appropriate instrument for the older adult population [20, 21]. Its validity has also been proved in an Iranian representative study, and exploratory factor analysis showed two dimensions [21]. In the current study, the Cronbach α value was calculated as 0.92.

The study data were collected through face-to-face interviews (approximately 20-30 minutes) in public places based on older adults' preferences. Descriptive and inferential statistics were used to analyze the data. In bivariate analysis, t test, ANOVA, and the Pearson correlation were applied to specify the association of the studied variables with the PSS. To determine the adjusted association of the independent variables with PSS, we used a multiple linear regression model. The significance level was set at 0.05. All statistics were performed in SPSS v. 16.

Results

In total, 302 community-dwelling older adults participated in the study, including 124 men (41.1%) and 178 women (58.9%), ranging in age from 60 to 90 years old (Mean±SD: 70.01±6.29 years) (Table 1). Mean±SD scores of the PSS and GHQ-12 were 130.95±16.05 and 7.29±5.55, respectively. The Mean±SD scores of the PSS for its subscales were as follows: emotional sup-

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Table 1. Sociodemographic characteristics of the community-dwelling older adults

Variables		No. (%)
Marital status	Married	217 (71.9)
	Divorced	8 (2.6)
	Widowed	66 (21.9)
	Never married	11 (3.6)
Education	Illiterate	11 (3.6)
	Reading and writing	142 (47)
	High school	122 (40.4)
	Academic degree	27 (9)
Living status	Spouse	114 (37.7)
	Spouse and children	103 (34.1)
	Children	37 (12.3)
	Other relatives	4 (1.3)
	Living alone	44 (14.6)
Housing status	Private	250 (82.8)
	Rent	52 (17.2)
Source of income	Pension	174 (57.6)
	Dependent if children's support	9 (3)
	Other †	119 (39.4)

† Other includes self-employed or no income.

port, 63.20±7.85; practical support, 24.22±3.88; spiritual support, 19.32±3.18; and satisfaction with support received, 12.42±2.24; and negative interactions, 11.78±2.46. Mean±SD scores of GHQ-12 subscales were 4.72±2.83 for "positively phrased items" and 3.09±2.57 for "negatively phrased items."

Findings showed no significant difference in the mean score of the PSS with sex, age, and education level among older adults with different sources of income. The results revealed a significant difference in the mean score of the PSS among widowed and married older adults (P=0.005), among living alone with those living with spouse or spouse and children (P=0.02), and among older adults who lived in the owned and rented homes (P=0.03). The Pearson correlation test showed that all subscales of the PSS and GHQ-12 were negatively and significantly correlated (P=0.01, r=-0.87) (Table2).

According to the multiple linear regression model, the emotional support (β=-0.46, P=0.001 95%CI; -0.23 - -0.09), satisfaction of received support (β=-0.18, P= 0.03, 95%CI; -0.46 - -0.13) and negative interactions (β=-0.17, P= 0.004, 95%CI; -0.34 - -0.06) predicted the "positively phrased items" of GHQ-12. These variables explained the total variance of "positively phrased items" of GHQ-12 (adjusted R2= 0.66). Also, emotional support (β=-0.36, P= 0.001, CI95%; -0.20 - -0.07), satisfaction of received support (β= -0.25, P=0.001, CI95%; -0.58 - -0.16), and negative interactions (β=-0.32, P= 0.001, CI95%; -0.53 - -0.28) predicted the "negatively phrased items" of GHQ-12 (adjusted R2=0.76) (Table 3).

Discussion

This study was designed to evaluate the association between PSS and mental health status among older adults. The results demonstrated that the mean score of elderlies' PSS is above average. This finding was consistent with the

Table 2. Correlation matrix between perceived social support and general health questionnaire-12 (GHQ-12)

Subscales		Test*	GHQ-12	
			Positively Phrased Items	Negatively Phrased Items
Perceived Social Support scale	Emotional support	r	-0.79	-0.83
	Practical support	r	-0.66	-0.67
	Spiritual support	r	-0.39	-0.47
	Satisfaction of received support	r	-0.75	-0.80
	Negative interactions	r	-0.67	-0.77

* Pearson correlation is significant at the 0.01 level (2-tailed).

results of studies, which were conducted in other family-oriented countries and disagreed with researches in weak family-bond cultural traditions [3, 22]. Respect and support for the elderly are essential in Iranian culture. On the other hand, the elderly tend to be optimistic. Therefore, it is justifiable to obtain such results. Our findings revealed that community-dwelling older adults of this study have a good mental health status. This result agreed with a lot of previous studies [23, 24]. In general, mental health in this group is better than other age groups due to their use of successful coping mechanisms and less impact of catastrophic events on them.

There is a relationship between PSS and mental health in total, which was confirmed in our study. Social support is one of the effective factors influencing the lifestyle of older adults [25]. The study findings are consistent with other studies that emotional support has the greatest effect on improving mental health and lessening stress and depression among older adults [3, 26]. Spiritual support has a fundamental role in increasing the mental health and life satisfaction of older adults [27]. However, we found the weakest relationship between spiritual support and positive signs of mental health. Considering the religious background of Iranian society, this finding is a bit strange and needs further study.

There was no significant difference between the PSS level among older adult women and men, but the practical and spiritual support was higher among older adult women than men. The woman has a higher level of PSS than men because they involve in larger social networks [28]. Others concluded that men have more PSS because they work outside the home, which resulted in more social relationships [29, 30]. Like our findings, some studies did not find a significant relationship [22]. Most older adult women in Iran have elementary education levels; they did not work outside the home, so they depend on the husband or children's help or government assistance (financial assistance, transportation, shopping), and therefore they reported more practical support. However, notable social and cultural changes

Table 3. Multiple linear regressions of the perceived social support and general health questionnaire-12 (GHQ-12)

Subscales		GHQ-12											
		Positively Phrased Items						Negatively Phrased Items					
		B	Β	T	Sig.	SE	95%CI lower-upper	B	β	T	Sig.	SE	95%CI lower-upper
PSS	Emotional support	-0.16	-0.46	-4.78	0.001	0.03	-0.23 , -0.09	-0.14	-0.36	-4.42	0.001	0.03	-0.20 , -0.07
	Practical support	-0.07	-0.10	-1.50	0.134	0.05	-0.18 , 0.02	0.01	0.01	0.25	0.79	0.04	-0.08 , 0.11
	Spiritual support	0.05	0.06	1.09	0.27	0.05	-0.04 , 0.15	-0.04	-0.04	-1.05	0.29	0.04	-0.14 , -0.04
	Satisfaction of received support	-0.24	-0.18	-2.08	0.03	0.11	-0.46 , -0.13	-0.37	-0.25	-3.54	0.001	0.11	-0.58 , -0.16
	Negative interactions	-0.20	-0.17	-2.88	0.004	0.07	-0.34 , -0.06	-0.41	-0.32	-6.41	0.001	0.06	-0.53 , -0.28
R^2		0.66						0.76					

lead to more women's participation in society, so this pattern may change soon. From the past to now, Iranian women have traditionally been used to spend most of their time with their peers on religious occasions and charities. Therefore, it is not surprising that they noted more spiritual support.

The present study indicated that married older adults had more emotional support than widowed, single, or divorced ones. Married life could create a stable network of interpersonal relationships and meet the need for belonging, especially when the older adults faced an empty nest. However, Arslantas concluded that living with a spouse increased loneliness. They argued that having a spouse in a traditionally Eastern culture such as Turkey sometimes restricts individuals, especially women [31].

This research revealed that the mean score of the PSS of older adults living with spouses or spouses and children was higher than lonely older adults; this finding was consistent with other studies' results [31, 32]. Older adults who live alone are at risk of catching many physical and mental problems [33].

The mean score of PSS was higher among older adults who lived in their own homes than those living in rented homes. This finding agreed with Rimaz's study [34]. Due to increased inflation and the lack of official supportive infrastructures in Iran, tenants have to pay a large portion of their income to landlords, creating many economic and family problems. This could probably create a feeling of inadequate support.

As for education status, this study showed no significant difference between total PSS among older adults with different educational levels, although those with a high level of education reported less negative interactions and spiritual support than others. However, some researchers concluded that older adults with high educational levels have higher PSS. They noted that older adults with higher education levels probably have more interpersonal relationships and a greater level of social support [34]. It seems that educated older adults have more knowledge and experiences, so they can effectively solve their conflicts with others and, as a result, have fewer negative interactions. In Iran, older adults with low educational levels tend to spend more time in rituals and mosques; however, educated older adults may choose other hobbies to spend their free time.

Our study revealed that retired older adults had a higher score in all subscales of the PSS. Similarly, a study found that older adults with a stable source of income have better PSS [34]. It can be concluded that income can greatly support individuals, especially in old age when older adults cannot work as young people.

This study reveals that PSS plays an essential role in improving the mental health of older adults. Also, older adults who were married, lived with spouses and children, and were educated obtained higher scores of PSS. Given the profound age-related changes such as widowhood and retirement that lead to alternations in the social network of older adults, health professionals and social policymakers must pay more attention to the effect of PSS. Considering the social and cultural changes in the traditional family structure in Iran, it is essential to develop more formal supportive services to maintain older adults' social support and decrease the risk of loneliness. It is suggested to conduct further research in other societies with different social and cultural backgrounds.

The present study had some limitations. Since this study is based on a cross-sectional method and given that PSS is highly dependent on cultural and social characteristics, older adults in different cultural and social situations may rate their level of PSS differently. Therefore, researchers should be cautious about generalizing results in other cultures and communities. Although we used the scale, which is tailored to older adults, it should be noted that using different scales maybe resulted in different findings. So, some of the differences in our results can be attributed to the methodological approach.

Ethical Considerations

Compliance with ethical guidelines

This study was approved by the Research Ethics Committee of the University of Social Welfare and Rehabilitation Sciences (Ethics Code: IR.USWR.REC.2016.78). All ethical principles are considered in this article. The participants were informed about the purpose of the research and its implementation stages. They were also assured about the confidentiality of their information and were free to leave the study whenever they wished, and if desired, the research results would be available to them.

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Authors' contributions

Conceptualization and methodology: Shima Nazari; Writing – original draft: Shima Nazari and Pouya Farokh-

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Conflict of interest

The authors declared no conflict of interest.

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