



Correlation Anxiety, Stress, and Depression with Perceived Social Support Among the Elderly: A Cross-Sectional Study in Iran

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Abstract

One of the common psychological problems of the elderly is depression, anxiety and stress, and dementia. Social support is one of the variables associated with the elderly lifestyle that can be considered as a product of the social dimension of lifestyle. The present study was conducted to investigate the association of anxiety, stress, and depression with perceived social support among elderly people in Jahrom city. This is an analytical cross-sectional study that was conducted on elderly people in Jahrom city in Iran. The sample size in this study was 210 people and was selected through cluster sampling and random selection of clinics located in Jahrom. Data were collected from two questionnaires: Depression Anxiety Stress Scales (DASS) and perceived social support. After completing the questionnaires, the data were analyzed using SPSS software version 21 with descriptive statistics, Pearson correlation. The results of Spearman's correlation coefficient showed significant relationships between social support for the elderly and depression ($r = -0.627$, $p < 0.001$), also observed between social support for the elderly and stress ($r = -0.535$, $p < 0.001$). However, no significant relationship was determined between social support for the elderly and anxiety ($r = -0.0909$, $p > 0.05$). Depression and stress can be reduced by improving social support in the elderly. More attention should also be given to social support for oldermen.

Keywords Anxiety · Depression · Social support · Elderly

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Introduction

Rapid demographic changes have made Iran as one of the countries with rapid senescence (Tajvar et al. 2018). The living environment of the elderly is a critical factor affecting their health and longevity (Winningham and Pike 2007). Almost all elderly people, particularly those living in institutions, experience a lot of social deficiencies and failures in the social support network (Alamdarlou et al. 2008). Research has shown a higher level of psychological well-being among old people living in the household than those residing in nursing homes (Kwang et al. 2003; Sun 2001).

Amongst the common psychological problems of the elderly are depression, anxiety, stress, and dementia. World Health Organization has reported that psychological disorders, particularly anxiety, are on the rise today with anxiety levels of 38.6% and 83.2% in developing and advanced countries, respectively. In Henderson's meta-analysis, positive outcomes were observed about the positive effects of social support on the reduction of depression and the most important psychiatric disorders due to deficit or lack of social support were reported to be depression, isolation, indifference, and frustration (Riahi et al. 2011).

Social support is one of the variables associated with the elderly lifestyle, which can be considered as a product of the social dimension of lifestyle. The most common definition of social support is the availability and quality of communication with people who give support sources when needed (Gallagher and Truglio-Londrigan 2004). Social support has a lot of impacts on the elderly as they will face many stresses, such as chronic diseases and physical constraints, and loss of income and spouse (Tajvar et al. 2018). The American Academy of Social Welfare considers social isolation as a major challenge for the elderly (Taylor et al. 2018). People with high social support have higher physical, psychological, and social health and show better adaptations in the face of life tensions (Roberts and Gotlib 1997). Existing studies on the relationship between social support and mental health largely emphasize Western societies. The cultural differences and social conditions of these countries with other parts of the world make it difficult to generalize the results of such studies to other countries (Tajvar et al. 2018).

As the increasing number of elderly people will face society with physical, psychological, and social problems and issues, the aging and special conditions of the elderly and their mental and physical health are among the issues demanding special attention. Understanding the characteristics of the elderly community can be an introduction to improving their quality of life depending on their different lifestyles (living in the family or independently) because the assessment of the health status among a group of people is very important to decide the type of intervention and prediction of social, health, and psychological requirements. The present study, therefore, was conducted to investigate the association of anxiety, stress, and depression with perceived social support among elderly people in Jahrom city.

Material and Method

This cross-sectional study was conducted on the elderly in Jahrom city in 2018. A sample size of 210 subjects was selected through cluster sampling and random selection

from clinics in Jahrom city. A sample size of 210 subjects was estimated using the formula with $\alpha = 0.05$, and power = 90%. This project was approved by Jahrom University of Medical Sciences with the ethics code number IR. JUMS.REC.1396.119.

Sampling was performed by observing all ethical issues and taking the verbal consent of subjects and ensuring them that their information would remain confidential. In this research, multi-stage sampling was used. First, Jahrom city was geographically divided into north, south, east and west regions. Then, one health center was selected from each region and a total of four centers were finally elected to cover all of the geographical regions. Then, sampling was performed among the elderly who were referred to these health centers to receive the routine elderly care and meet the inclusion criteria of the study.

Data were collected by two standard questionnaires.

Anxiety, Depression and Stress scale (DASS). This questionnaire with 42 questions measuring anxiety, stress, and depression was developed by Leviband et al. The questionnaire answers include a scale of four options, with “very high” and “never” scored 0 and 3, respectively. The Persian translation of this questionnaire was validated by Asghari Moghadam et al. and was confirmed in all subscales of depression, stress, anxiety with Cronbach’s alphas of 0.93, 0.92, and 0.90, respectively (Forouzesh Yekta et al. 2018).

Perceived Social Support Scale: A multidimensional perceived social support scale developed by Zimat et al., measuring three subscales of support by family, friends, and people by 12 questions with a 5-point Likert scale. Bruwer et al. (Bruwer et al. 2008) estimated the internal reliability of this tool to be 86–90% for the subscales of this instrument and 86% for the entire tool measured using Cronbach’s alpha in a sample of 788 high school students (Bruwer et al. 2008). Salami et al. reported Cronbach’s alpha coefficients of 89, 86, and 82% for the social support received from the family, friends, and other important people in life (Salami et al. 2009).

After completing the questionnaires, the information was coded and introduced to the computer. Data were analyzed using SPSS 21 software, descriptive statistics, Pearson correlation, and Mann-Whitney and Kruskal-Wallis tests.

Results

A total of 210 elderly people living in Jahrom city participated in the study. Their mean age was 70.91 ± 7.91 years with minimum and maximum ages of 60 and 100 years, respectively. The frequency of demographic variables in the participating elderly showed that 52.4% were male and 47.6% were female. The education levels were diploma (82.4%) and lower. Insurance coverage was recorded in 96.2%, 41.9% of which covered by social security and the rest by other insurance institutions.

Social support levels were high in 144 (68.6%), moderate in 44 (21.0%), and low in 22 (10.5%) of the elderly participants. The level of depression was normal in 194 (92.4%) participants, and only 14 (6.7%) and 2 (1%) subjects presented slight and moderate levels, respectively. The level of anxiety was normal in 206 (98.1%) elderly subjects and 2 (1%) and 2 (1%) were at moderate and slight levels. All the elderly level exhibited a normal level of stress.

The results of statistical analysis with Mann-Whitney and Kruskal-Wallis tests showed significant differences between men and women in terms of depression, stress,

and social support ($p < 0.05$). The depression and stress levels in men were higher than those of women, whereas social support was higher in women than in men.

Significant differences were detected among the elderly with different education levels in terms of depression, stress, and social support ($p < 0.05$). The depression and stress levels were uppermost in the elderly with a diploma degree, and those with a bachelor degree showed the highest levels of social support.

There were significant differences among the elderly covered by different insurances and depression, stress, and social support ($p < 0.05$). The highest levels of depression, stress, and social support were observed in the elderly covered by health care, social security, and health insurances, respectively.

The results of Spearman's correlation coefficient (Table 1) showed significant relationships between social support for the elderly and depression ($r = -0.627$) ($p < 0.001$), also observed between social support for the elderly and stress ($r = -0.535$) ($p < 0.001$). However, no significant relationship was determined between social support for the elderly and anxiety ($r = -0.090$) ($p > 0.05$). On the other hand, there is an inverse correlation between social support for the elderly with increasing age ($r = -0.164$) and the number of children ($r = -0.169$).

Discussion

The results showed that most of the elderly in this study had high perceived social support. It seems that elderly people have a good position in the family and other social groups in such cities as Jahrom, where religious beliefs are prominent and native traditions and culture have not undergone many changes. In a study by Emami Naiini in Tehran, there was a moderate level of perceived social support in the elderly and this support was higher in the family dimension than those of friends and individuals (Emaminaeini et al. 2017). This difference in the level of social support can be attributed to cultural differences and the type of attitude at life in metropolises in comparison to smaller cities.

The levels of depression and stress in older men were higher than those of elderly women, and the level of social support in older women was higher than that of elderly men. Tajvar's study showed that older women received more social support than men

Table 1 Relationship between social support and stress, anxiety, and depression variables in the elderly participating in the study

	Depression	Anxiety	Stress	Social support	Age	No. of children
Depression	1					
Anxiety	0.345**	1				
Stress	0.641**	0.343**	1			
Social support	-0.627**	-0.090	-0.535**	1		
Age	0.114	-0.067	0.050	-0.164**	1	
No. of children	0.030	-0.119	0.023	-0.169**	0.415**	1

** $P < 0.05$

(Tajvar et al. 2018). In the study of Emami Nayini, however, the relationship between perceived social support and gender was not significant (Emaminaeini et al. 2017). Also, a research by Nabavi et al. indicated that mental health and social support were the same among elderly women and men, but Will Gas reported higher social support received by women than that of men (Nabavi et al. 2014). These contradictory findings in various studies require a more accurate study taking into account other potentially affecting variables.

The findings of this study showed a significantly negative correlation between perceived social support and depression. Emami Nayini also reported a negative correlation between social support and depression in the elderly (Emaminaeini et al. 2017). research by Bakhshani also revealed a negative correlation between social support and depression with a significantly lower mean score of social support in depressed than non-depressed people (Bakhshani et al. 2003). The results of Gholizadeh's research showed that the stronger the emotional, spiritual, and social support of the elderly, the lesser the symptoms of depression would be (Gholizadeh and Shirani 2010). These consistent results confirm a negative correlation between social support and depression in the elderly. On the one hand, depressed elderly people seem to lack the ability to communicate constructively with family members and other community members to receive their social support, and, on the other hand, the lack of perceived social support in the elderly may lead to the incidence and exacerbation of their depression symptoms.

Our findings demonstrated a significant correlation between perceived social support and stress. However, there was no significant relationship between social support and anxiety among the elderly. Some researchers believe that depression and anxiety are two separate constructs, though, others believe that it is part of a general construct, i.e. negative excitability (Winningham and Pike 2007). Although previous studies have not addressed the relationship between anxiety, stress, and perceived social support in the elderly, a study by Woodhead showed that social support was effective in controlling the stress and burnout of nursing staff (Woodhead et al. 2016). Life events are among the stressors for the elderly, and chronic diseases predispose people to stress and mood disorders, while perceived social support for the elderly can be a factor in creating a sense of self-esteem and hope, and reducing anxiety and stress in these people.

Conclusion

There is a relatively high level of elderly perceived social support in Jahrom. Depression and stress can be reduced by improving social support in the elderly. More attention should also be given to social support for elderly men. Interventional research is recommended to improve social support in the elderly and to follow up its results in promoting the psychological well-being of these people.

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Compliance with Ethical Standards

Conflict of Interest All the authors declare no conflict of interests.

Informed Consent None.

Ethical Treatment of Experimental Subjects (Animals and Humans) No experimental treatment was conducted on either human or animal subjects in this study.

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References

- Alamdardlou, G. H., Dehshiri, G., Shojaie, S., & Rad, E. H. (2008). Health and loneliness status of the elderly living in nursing homes versus those living with their families. *Sälmand*, 3(2), 557–564 [Persian].
- Bakhshani, N. M., Birashk, B., Atefvahid, M. K., & Bolhari, J. (2003). Correlation of social support and negative life events with depression. *Iranian Journal of Psychiatry and Clinical Psychology*, 9(2), 49–55 [Persian].
- Bruwer, B., Emsley, R., Kidd, M., Lochner, C., & Seedat, S. (2008). Psychometric properties of the multidimensional scale of perceived social support in youth. *Comprehensive Psychiatry*, 49, 195–201.
- Emaminaeini, M., Bakhtiyari, M., Hatami, H., Khodakarim, S., & Sahaf, R. (2017). Depression and perceived social support in the elderly. *Iranian Journal of Ageing*, 12(2), 192–207 [Persian].
- Forouzesh Yekta, F., Yaghubi, H., Mootabi, F., Roshan, R., Gholami Fesharak, M., & Omidi, A. (2018). The effectiveness of mindfulness based stress reduction program on distress, emotion regulation and marital satisfaction in non-maritally distressed women. *Clinical Psychology Studies*, 8(31), 67–90 [Persian].
- Gallagher, L. P., & Truglio-Londrigan, M. (2004). Community support: Older adults' perceptions. *Clinical Nursing Research*, 13(1), 3–23.
- Gholizadeh, A., & Shirani, E. (2010). The relation between personal, family, social and economic factors with the life satisfaction in Isfahan elderlies. *Journal of Applied Sociology*, 21(1), 69–82 [Persian].
- Kwang, Y. S., Gu, M. O., & Un, Y. (2003). A study on the health status and the needs of health-related services of female elderly in an urban–rural combined city Korea. *Journal of Community Health Nursing Academy Society*, 17, 47–57.
- Nabavi, S. H., Alipour, F., Hejazi, A., & Rashedi, V. (2014). Relationship between social support and mental health in older adults. *Medical Journal of Mashhad University of Medical Sciences*, 57(7), 841–846 [Persian].
- Riahi, M. E., Aliverdinia, A., & Pourhossein, Z. (2011). Relationship between social support and mental health. *Social Welfare Quarterly*, 10(39), 85–121 [Persian].
- Roberts JE, Gotlib IH (1997). Social support and personality in depression. depression: Implications from quantitative genetics. In G. R. Pierce, & B. Lakey (Eds.), *Sourcebook of social support and personality* (pp. 187–214). New York: Plenum Press.
- Salami, A. R., Joukar, B., & Nikpour, R. (2009). Internet and communication: perceived social support and loneliness as antecedent variable. *Psychological Studies*, 5(3), 81–102 [Persian].
- Sun, W. P. (2001). State and policy issues of home aged welfare service. *The Journal of the Korean Deontology Society*, 4, 29–33.
- Tajvar, M., Grundy, E., & Fletcher, A. (2018). Social support and mental health status of older people: A population-based study in Iran-Tehran. *Ageing & Mental Health*, 22(3), 344–353.
- Taylor, H. O., Taylor, R. J., Nguyen, A. W., & Chatters, L. (2018). Social isolation, depression, and psychological distress among older adults. *Journal of Aging and Health*, 30(2), 229–246.

- Winningham, R. G., & Pike, N. L. (2007). A cognitive intervention to enhance institutionalized older adults' social support networks and decrease loneliness. *Ageing & Mental Health, 11*(6), 716–721.
- Woodhead, E. L., Northrop, L., & Edelstein, B. (2016). Stress, social support, and burnout among long-term care nursing staff. *Journal of Applied Gerontology, 35*(1), 84–105.

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