

# The Relationships of Alexithymia and Social Intelligence with Quality of Life According to the Moderating Role of Social Anxiety in Women-Headed Household

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## Abstract

**Background:** Quality of life is a multidimensional and dynamic concept that can be assessed based on the differences between expectations and reality level. The present study aimed to investigate the mediating role of social anxiety in the causal relationships of alexithymia and social intelligence with the quality of life in women-headed household in Ahvaz.

**Methods:** The research design was causal-correlational and had a field type. A total of 261 women-headed household were selected from Ahvaz City by convenience sampling. The research instrument included World Health Organization Quality of Life Questionnaire-Short Form, Ahvaz Alexithymia scale (AAS- 26 questions), Tromso Social Intelligence Scale (TSIS), and Jerabek Social Anxiety Scale. Analysis of the data involved both descriptive and inferential statistics including mean, standard deviation, Pearson's correlation, and path analysis. Data analysis was done using SPSS version 24.

**Results:** A direct and positive relationship was observed between social intelligence and quality of life ( $\beta=0.152$ ,  $P=0.003$ ) and between alexithymia and social anxiety ( $\beta=0.245$ ,  $P=0.001$ ). There was a direct and negative relationship between social anxiety and quality of life ( $\beta=-0.618$ ,  $P=0.001$ ). There was no direct and significant relationship between alexithymia and quality of life ( $\beta=0.043$ ,  $P=0.417$ ). The path analysis results indicated that social anxiety had a mediating role in the relationship between alexithymia and quality of life ( $\beta=-0.246$ ,  $P=0.001$ ) as well as the relationship between social intelligence and quality of life ( $\beta=-0.275$ ,  $P=0.001$ ).

**Conclusion:** Social anxiety plays an important role in the relationship between social intelligence, alexithymia, and quality of life.

**Keywords:** Alexithymia, Social intelligence, Social anxiety, Quality of life, Women

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## 1. Introduction

The public quality of life was primarily limited to economic and welfare issues; however, because psychological and mental evaluations play major roles in the individual perception of conditions, gradually entered the psychological and social sciences. Quality of life reflects the differences between “individual expectations and hopes” and the “status quo” of life (1). In recent decades, this construct has become more important, dealing with welfare needs in addition to individual and social needs. Quality of life is a concept referring to people, and like expectations, it is determined through the dynamic interactions among individuals, society, and residential place (2). Many factors affect the quality of life from both objective and subjective aspects. These factors include welfare and health (3), culture (4), social capital and leisure (5), interpersonal communication (6), personal characteristics

(7), and psychological factors.

Alexithymia is a factor that seems to be associated with quality of life. It is an emotional disorder used for describing a set of emotional characteristics, and it makes the cognitive processing and emotional self-expression difficult. Pellerone and colleagues (8) argued that these people cannot describe their own and others' feelings and emotions, lack creative, imaginative activities, and the thinking style that pays great attention to external details of events and is unable to process their emotional information. Since these stimuli are associated with physiological motivation, more attention is paid to the physical aspect. The inability to identify the others' emotions reduces the ability to sympathize and disrupts the social relations, leading to isolation and fewer interactions with others. Vieira and colleagues (9) suggested that the relationship between quality of life and alexithymia might be observed in certain

dimensions. People suffering from alexithymia often use a negative pattern in inter-personal interactions. This leads to a decrease in individual adaptation and is associated with greater loneliness.

Social intelligence is a type of intelligence that deals with communicational skills and social functioning in inter-personal situations. Social intelligence is the ability to fathom and act wisely and efficiently in inter-personal performances (10). A proper relationship with the surrounding environment is an important factor in the individuals' joy and satisfaction (11). Social intelligence gives people the ability to understand and predict their own and others' behaviors and feelings for a successful social communication and more adaptive behavior. Research has shown that social intelligence results in adaptive relationships with others and successful social relationships. Good social relationships, in turn, lead to friendly, supportive, thoughtful, and adaptive behaviors in people and facilitate the achievement of success in personal and social life. Hakiminya and colleagues (12) reported a significant positive relationship between social intelligence and quality of life. Farooq Khan and Bhat (13) found that social intelligence played an important role in individual and social subjective well-being and life satisfaction; moreover, social intelligence subcomponent, "social skill", described satisfaction in the most optimal manner.

Social anxiety is the fear of negative evaluation by others at various social situations; it is an effective variable in improving the quality of life, thereby influencing the individuals' performance. Therefore, a person experiencing such a situation has no desire to start communicating with others so as to avoid being judged by others (14). Studies have shown that the quality of life is significantly lower in people with social anxiety, particularly in public health, vitality, social functioning, and mental health (15). Olatunji and colleagues (16) reported that the quality of life was weaker in patients with anxiety disorders compared with the control group. Beidel and colleagues (17) showed that social anxiety scores decreased under the influence of learning communication skills.

Women-headed household constitute a group of unaccompanied women responsible for the guardianship and custody of children and people under the guardianship. These husbands are not able to provide family welfare due to various reasons such as addiction, unemployment, crime, disability and disease; under such conditions, women provide family welfare. Paying attention to the life quality of these women is

effective in reducing their psychological and personal disturbances, and seems to play a role in improving their daily relations and increasing their health. As mentioned, emotional abilities play an important role in successful relationships and psychological adjustment. It also increases the ability of individuals to organize and control relationships in social situations.

Given the paucity of studies on women-headed household, the present study sought to investigate a causal relationship between alexithymia and social intelligence according to the mediating role of social anxiety with regards to the quality of life of women-headed household.

## 2. Methods

The research design was causal-correlational with a field type. The statistical population of the study consisted of all the women-headed household in Ahvaz city in 2018. The convenience sampling method was used to select the sample group. To this end, three questionnaires were firstly selected and clarified for the participants. The interviewer completed the questionnaires through interviews by being present in the city and different regions of the city as well as by primary interviews with female vendors and being ensured about having husbands and being women-headed household. The participants were ensured that their information would remain strictly confidential. A total of 300 questionnaires were distributed and 261 were analyzed following the elimination of incomplete questionnaires. The sample size was estimated at 261 by SPSS and the test power index. Data were analyzed by descriptive and inferential statistics such as mean, standard deviation, minimum and maximum scores, and Pearson correlation coefficient. Cronbach's alpha coefficient was calculated to determine reliability and validity. The skewness and kurtosis were utilized to specify the data normality and the path analysis was used to assess the proposed model. SPSS Amos was further used for analyzing the data. The significance level of research was considered to be  $\alpha=0.05$ .

### 2.1. Research instruments

**2.1.1. World Health Organization Quality of Life Questionnaire-Short Form:** It has 26 questions that measure four dimensions, namely physical, psychological, and social health, and physical environment. It is utilized as a comprehensive scale and generally contains the total quality of life and public health levels. The scale was designed by a

group of WHO experts in 1997 who adjusted the items of a 100-question form of the questionnaire. The questionnaire is comprised of five items ranging from “never” (1) to “very high” (5). It should be noted that questions 3, 4, and 26 are reversely scored. The minimum score of scale is 26 and the maximum score is 130. According to the results reported by the creators of the World Health Organization Quality of Life Questionnaire in 15 central centers of this organization, the Cronbach’s Alpha coefficient ranged from 0.73 to 0.89 regarding four subscales and the whole scale (18). Iranian researchers used the test-retest with an interval of two weeks, split-half, and Cronbach’s alpha in order to obtain the reliability of 0.77, 0.77, and 0.75 (19). In the present study, Cronbach’s alpha coefficient was 0.87 for the questionnaire.

**2.1.2. Ahvaz Alexithymia Scale (AAS-26):** The test was constructed based on the exploratory factor analysis (20) and a single-factor test with 26 items, a factor loading of 0.40, and the Cronbach’s alpha of 0.89. The reliability of one-month test-retest was 0.87. The test was designed in four items (from never to most often). The validity of the test was 0.81 according to Toronto Alexithymia Scale (TAS-20), and 0.82, 0.75, and 0.72 based on the triple subscales of Toronto test. According to scoring, “never” is assigned 1 and “most often” receives score 4. In the present study, Cronbach’s alpha coefficient was 0.82 for the questionnaire.

**2.1.3. Social Intelligence Scale:** Tromso Social Intelligence Scale (TSIS), comprising 21 questions, was designed by Silvera and colleagues (21). It measures the individual social intelligence and its subscales (social information processing subscale, social awareness subscale, and social skills subscale). A 7-point Likert scale is used for scoring, including strongly agree, somewhat agree, slightly agree, no idea, slightly disagree, somewhat disagree, and strongly disagree. Questions 9, 10, 11, 12, 13, 14, 15, 18, 19, 20, and 21 are reversely scored. Based on Rahimi and Eftekhari (22), the validity of the questionnaire was 0.79, the reliability was 0.91 (21 questions), the social information was 0.84 (8 questions), and the social skills was 0.81 (6 questions) for, indicating the high reliability of the questionnaire. In Rezaie’s research (23), the reliability of questionnaire was 0.75 using Cronbach’s alpha for the whole questionnaire. In the present study, the Cronbach’s alpha coefficient was 0.87 for the questionnaire.

**2.1.4. Jerabek Social Anxiety Scale:** The Social Anxiety Scale (SAS) was designed by Lina Jerabek (1996)

in a 25-item form. The subscales of this test include fear of strangers, fear of evaluation by others, fear of public speaking, fear of social isolation, and fear of manifesting anxiety symptoms; these subscales are scored based on a 5-point Likert scale ranging from almost never to almost always. Higher scores indicate higher levels of social anxiety. The findings of Aslami and colleagues in Iran showed that the reliability of this questionnaire was 0.76 using Cronbach’s alpha coefficient. The validity of this questionnaire was further corroborated by factor analysis method (24). In the current study, the reliability of the questionnaire was 0.78 using Cronbach’s alpha coefficient.

The participants willingly filled out the questionnaires and signed written informed consent. The study was approved by the Ethics Committee of Islamic Azad University, Ahvaz branch.

### 3. Results

The participants included 261 women-headed household with high school (15.50%), middle school (64.50%), and no (20%) education. The demographic variables of the participants are shown in Table 1.

The analysis was performed on 261 individuals, and the mean±SD scores of quality of life, alexithymia, social intelligence, and social anxiety were  $77\pm 40.62$ ,  $59.43\pm 24.97$ ,  $91.72\pm 36.15$ , and  $65.83\pm 18.58$ , respectively.

Table 2 presents the results of a correlation matrix between research variables because the structural equation modeling was based on the variance-covariance matrix or the correlation between variables. Results of the correlation test showed a positive and significant correlation between research variables based on the data of the table at a level of  $P < 0.01$ .

The path analysis model was used to investigate the mediating role of social anxiety concerning the relationships of alexithymia and social intelligence with the quality of life. Figure 1 shows the first proposed model.

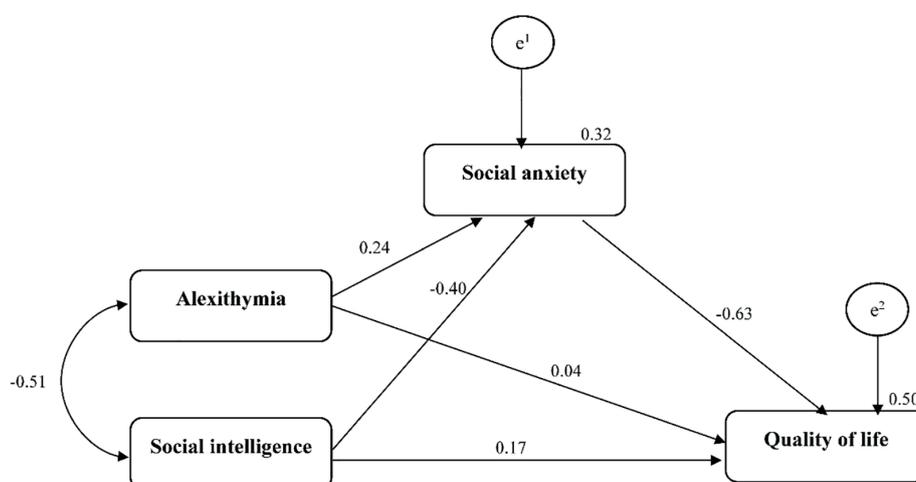
According to the data of Table 3, the root means square error of approximation (RMSEA=0.475) showed that the initial model required modification. To this end, the non-significant relationship between alexithymia and quality of life was removed. Figure 2 shows the final model in which the root means square error of approximation (RMSEA=0.0001),  $\chi^2/df=0.659$  and CFI=1.00, indicated a good model fit.

**Table 1:** Demographic variables of the participants

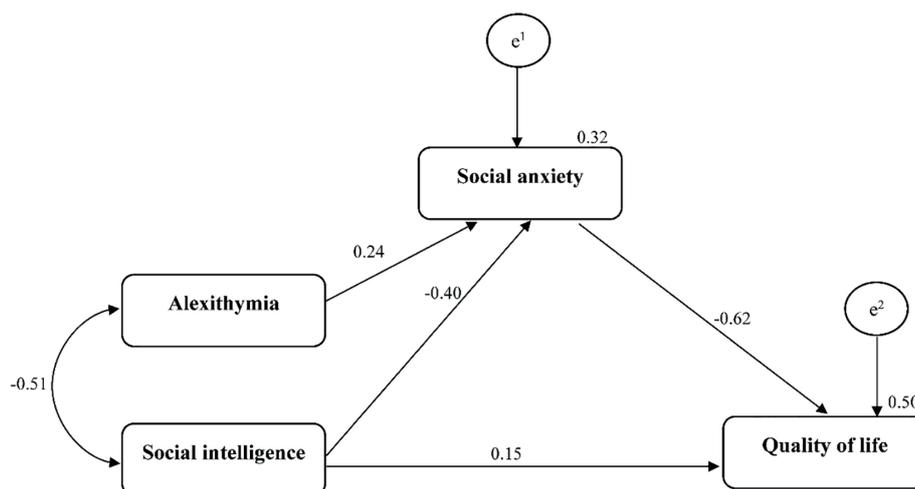
Demographic variables		n	%
Education	None	52	20.00
	High school	41	15.50
	Middle school	168	64.50
Number of children	1-3	81	30.90
	4-5	118	45.50
	6-8	62	23.60
Marital duration (years)	6 -15	68	25.50
	16-25	116	44.60
	26-40	78	29.90
Husband's problem	Paralysis and amputation due to illness	21	8.20
	Addiction	38	14.50
	Nerve disorders	38	14.50
	Impotent	48	18.20
	Prisoner	26	10.00
	Unemployed	48	18.20
	Apoplexy	42	16.40

**Table 2:** Pearson correlation coefficient between variables

Variables	Quality of life	Alexithymia	Social intelligence	Social anxiety
Quality of life	1			
Alexithymia	-0.323	1		
Social intelligence	0.474	-0.508	1	
Social anxiety	-0.697	0.446	-0.521	1

**Figure 1:** The figure shows initial model pertaining to the mediating role of social anxiety in the relationship of alexithymia and social intelligence with quality of life.**Table 3:** Initial and final model fit indicators

Fit indicators	Initial model	Final model
$\chi^2$	0.000	0.659
df	0	1
( $\chi^2$ /df)	-	0.659
p	-	0.417
GFI	0.00	1.00
RMSEA	0.475	0.0001



**Figure 2:** The figure shows the modified final model pertaining to the mediating role of social anxiety in the relationship of alexithymia and social intelligence with quality of life.

**Table 4:** Path coefficients of direct effects between research variables in the initial and final model

Path	Initial model			Final model		
	Path type	$\beta$	P	Path type	$\beta$	P
Alexithymia to quality of life	Direct	0.043	0.417	Direct	-	-
Social intelligence to quality of life	Direct	0.168	0.002	Direct	0.152	0.003
Alexithymia to social anxiety	Direct	0.245	0.001	Direct	0.245	0.001
Social intelligence to social anxiety	Direct	-0.396	0.001	Direct	-0.396	0.001
Social anxiety to quality of life	Direct	-0.628	0.001	Direct	-0.618	0.001

**Table 5:** Results of the Bootstrap method for investigating indirect and intermediary paths

Predictor variable	Mediator Variable	Criterion variable	Initial model		Final model	
			Bootstrap	P	Bootstrap	P
Alexithymia	Social anxiety	Quality of life	-0.250	0.001	-0.246	0.001
Social intelligence	Social anxiety	Quality of life	-0.280	0.001	-0.275	0.001

Table 4 presents the findings related to estimating the path coefficients to investigate the direct hypotheses.

The results showed that alexithymia did not have a significant direct effect on the quality of life ( $\beta=0.043$ ,  $P=0.417$ ). The direct effect of social intelligence on the quality of life was significant ( $\beta=0.152$ ,  $P=0.003$ ). Moreover, alexithymia had a significant direct impact on social anxiety ( $\beta=0.245$ ,  $P=0.001$ ). The direct effect of social intelligence on social anxiety was significant ( $\beta=-0.396$ ,  $P=0.001$ ). However, social anxiety significantly affected the quality of life in a direct manner ( $\beta=-0.618$ ,  $P=0.001$ ) (Table 4). Bootstrap method was used to determine the significance of intermediary relationships. The indirect path of alexithymia towards quality of life was statistically significant according to the mediating role of social anxiety ( $\beta=-0.246$ ,  $P=0.001$ ). Furthermore, the indirect path of social intelligence

towards quality of life through the mediating role of social anxiety was significant ( $\beta=-0.275$ ,  $P=0.001$ ) (Table 5).

#### 4. Discussion

The present study aimed to investigate the mediating role of social anxiety in relationships of alexithymia and social intelligence with the quality of life in women-headed household. The results showed that the proposed model had a good fit. In general, except for the direct path of alexithymia and quality of life, all direct and indirect paths had significant relationships. Based on the findings, there was a direct correlation between the social intelligence and quality of life in women-headed household, such that those experiencing a higher social intelligence obtained higher quality of life scores. This finding is consistent with the research results of

Hakiminya and colleagues (12), Farooq Khan and Bhat, (13), and Dogan and Eryilmaz, (11). In general, several studies have supported this idea. Good interpersonal relationships facilitate individual well-being, resulting in a good quality of life (11, 25). Hooda and colleagues (26) argued that had a positive contribution to happiness, life satisfaction, and optimism; however, lack of social intelligence could cause anxiety and social phobia, depression, and loneliness. As mentioned, those with high social intelligence had higher social skills, social awareness and social utility, and better inter-personal relations. Social skill was an aspect of social intelligence; therefore, efficient and successful relationships with others had a direct or mediating contribution to individual happiness. People with high social intelligence have a good assessment of the emotions and thoughts of the opponent, which can have a positive impact on their social support and quality of life.

There was a positive relationship between alexithymia and social anxiety, which is in line with the research results of Panayiotou and colleagues (27), and Ertekin and colleagues (28). People with alexithymia had emotional distress and could not cope with different social situations due to their maladaptive coping styles and inability to identify emotions, leading to anxiety and mental distress (29). When emotional information is not perceived and evaluated in the process of cognitive processing, emotional distress and cognitive confusion are ensued along with personal and inter-personal behavior disorders, leading to mental health disorders.

In the present study, there was a direct inverse relationship between social intelligence and social anxiety, which is in accordance with the research results of Hampel and colleagues (30), Nolidin and colleagues (31), and Nikolic, (32). People with high social anxiety are often afraid of social situations due to their inability to predict others' behaviors and mental states. Based on the Doherty's theory of mind (33), people with high social cognitive abilities pay more attention to mental and emotional status and are more able to predict their own and others' behaviors (33). People with higher scores in social anxiety had a lower performance in social situations and a lower power of empathy in interaction with others (14).

The results showed that there was a direct inverse relationship between social anxiety and quality of life in women-headed household. This finding is consistent with the research results of Rapaport and colleagues

(34), Wong and colleagues (35), and Li other colleagues (36). According to their findings, people with higher social anxiety scores often experienced lower interpersonal relationships; therefore, they had lower social support. Rapaport and colleagues (34) reported that social anxiety was able to influence the quality of life by affecting different domains of life, such as disruption in social relationships and work failure. These people experienced a lower quality in many domains of life and had a lower satisfaction with life. The present study also confirmed the mediating role of social anxiety in the relationship between alexithymia and quality of life. In other words, social anxiety played a mediating role in the relationship between alexithymia and quality of life. As mentioned, alexithymia and difficulty in describing feelings could reduce the quality of life and optimal social relations. It seems that if this situation is associated with social anxiety, it has a double effect on the quality of life, exposing the individuals to injury and psychological turmoil. Furthermore, the indirect relationship between social intelligence and quality of life was significant with the mediating role of social anxiety. As previously mentioned, social intelligence means managing efficient social relations; individuals with higher scores in this variable have good social interactions; therefore, they have high social acceptance and support and experience a good quality of life. On the contrary, these individuals have a lower quality of inter-personal relationships if they have higher social anxiety, thereby experiencing a lower quality of life.

## 5. Conclusion

The present study investigated the causal effects of certain psychological variables on the quality of life in women-headed household. Psychological and personal differences are structural and effective factors in dealing with life problems and stress. Women-headed household, suffering from alexithymia and social anxiety, receive lower social support due to the inability to effectively communicate with others. This leads to feelings of loneliness, insecurity about the future, and fear of coping with problems. On the contrary, high social intelligence improves effective relationships and adaptation with the surrounding environment. People with high social intelligence are flexible, self-conscious, and cognizant of the social environment, hence able to better manage events and situations. Therefore, they have higher social competence and adjustment that facilitate the achievement of success in social life. The quality of life of women-headed households is often affected by personal and familial problems. Having the responsibility of taking care of their husbands and

children along with many other roles are the major sources of stress in these women. The quality of life can determine and predict the levels and effects of diseases, inabilities, and damages to physical and mental health. According to the findings, institutes and centers for providing services for such women can increase the knowledge of women and their families and enhance their ability to deal with problems and damages by holding periodic programs to promote communication skills, social skills training classes, counselling services, and supportive programs.

The research limitations included the lack of necessary cooperation between respondents due to lack of time, and at times, lack of confidence in interviewers; in addition, the questionnaires took a long time to complete due to the low literacy of the interviewees. The results cannot be generalized since its data were collected only from Ahvaz through a convenience sampling method.

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### Ethical Approval

The participants willingly filled out the questionnaires and signed written informed consent. The study was approved by the Ethics Committee of Islamic Azad University, Ahvaz Branch.

### Conflict of Interest

The authors declared no conflict of interest.

### References

- Šoltés V, Nováková B, Szabo ZK. A Comparative Study on Satisfaction with Current Standard of Living and its Effects on Overall Life Satisfaction: Case of Romania, V4 and EU-15. *Quality Innovation Prosperity*. 2018;22(1):58-72. doi: 10.12776/qip.v1i1.1047.
- Hadi N, Shabaninezhad E, Shabgard Shahraki Z, Montazeri A, Tahmasebi S, Zakeri Z, et al. The Reduction in Upper Extremity Volume and Improved Quality of Life in Women with Post-Mastectomy Lymphedema by Complex Decongestive Therapy. *Women's Health Bull*. 2016;3(2):1-7. doi: 10.17795/whb-29324.
- Cao Y, Tang X, Yang L, Li N, Wu YQ, Fan WY, et al. [Influence of chronic diseases on health related quality of life in middle-aged and elderly people from rural communities: application of EQ-5D scale on a Health Survey in Fangshan, Beijing]. *Zhonghua Liu Xing Bing Xue Za Zhi*. 2012;33(1):17-22. [PubMed: 22575103]. Chinese.
- Molzahn AE, Kalfoss M, Makaroff KS, Skevington SM. Comparing the importance of different aspects of quality of life to older adults across diverse cultures. *Age Ageing*. 2011;40(2):192-9. doi: 10.1093/ageing/afq156. [PubMed: 21186234].
- Wendel-Vos GC, Schuit AJ, Tijhuis MA, Kromhout D. Leisure time physical activity and health-related quality of life: cross-sectional and longitudinal associations. *Qual Life Res*. 2004;13(3):667-77. doi: 10.1023/B:QURE.0000021313.51397.33. [PubMed: 15130029].
- Nazari R, Safdel H. Modeling the Effect of Interpersonal Communication of Staff on Occupational Life Quality and Organizational Commitment in Sport Organizations. *New Trends in Sport Management*. 2016;3(11):21-32.
- Juhl AA, Damsgaard TE, O'Connor M, Christensen S, Zachariae R. Personality Traits as Predictors of Quality of Life and Body Image after Breast Reconstruction. *Plast Reconstr Surg Glob Open*. 2017;5(5):e1341. doi: 10.1097/GOX.0000000000001341. [PubMed: 28607864]. [PubMed Central: PMC5459647].
- Pellerone M, Formica I, López MH, Migliorisi S, Granà R. Relationship between parenting, alexithymia and adult attachment styles: a cross-national study in Sicilian and Andalusian young adults. *Mediterranean Journal of Clinical Psychology*. 2017;5(2):1-24. doi: 10.6092/2282-1619/2017.5.1557.
- Vieira RV, Vieira DC, Gomes WB, Gauer G. Alexithymia and its impact on quality of life in a group of Brazilian women with migraine without aura. *J Headache Pain*. 2013;14:18. doi: 10.1186/1129-2377-14-18. [PubMed: 23565860]. [PubMed Central: PMC3620425].
- Cejudo J, Rodrigo-Ruiz D, López-Delgado ML, Losada L. Emotional Intelligence and Its Relationship with Levels of Social Anxiety and Stress in Adolescents. *Int J Environ Res Public Health*. 2018;15(6):1073. doi: 10.3390/ijerph15061073.

11. Doğan T, Eryılmaz A. The Role of Social Intelligence in Happiness. *Croatian Journal of Education*. 2014;**16**(3):863-78.
12. Hakiminya B, Poorafkari N, Ghafari D. Factors Affecting Quality of Life with Emphasis on Social Intelligence and Social Health (The Case of Kermanshah City). *Journal of Applied Sociology*. 2017;**28**(2):163-78. doi: 10.22108/jas.2018.74645.0. Persian.
13. Khan T, Bhat S. Social Intelligence, Life Satisfaction and Depressive Symptoms among Adult Women. *International Journal of Indian Psychology*. 2017;**4**(3):35-40. doi: 10.25215/0403.04403.
14. Morrison AS, Heimberg RG. Social anxiety and social anxiety disorder. *Annu Rev Clin Psychol*. 2013;**9**:249-74. doi: 10.1146/annurev-clinpsy-050212-185631. [PubMed: 23537485].
15. Watanabe N, Furukawa TA, Chen J, Kinoshita Y, Nakano Y, Ogawa S, et al. Change in quality of life and their predictors in the long-term follow-up after group cognitive behavioral therapy for social anxiety disorder: a prospective cohort study. *BMC Psychiatry*. 2010;**14**(10):81. doi: 10.1186/1471-244X-10-81. [PubMed: 20942980]. [PubMed Central: PMC2965130].
16. Olatunji BO, Cisler JM, Tolin DF. Quality of life in the anxiety disorders: A meta-analytic review. *Clin Psychol Rev*. 2007;**27**(5):572-81. doi: 10.1016/j.cpr.2007.01.015. [PubMed: 17343963].
17. Beidel DC, Alfano CA, Kofler MJ, Rao PA, Scharfstein L, Wong Sarver N. The impact of social skills training for social anxiety disorder: a randomized controlled trial. *J Anxiety Disord*. 2014;**28**(8):908-18. doi: 10.1016/j.janxdis.2014.09.016. [PubMed: 25445081]. [PubMed Central: PMC4254620].
18. World Health Organization. Division of Mental Health and Prevention of Substance Abuse. WHOQOL: measuring quality of life. World Health Organization; 1997.
19. Nejat S, Montazeri A, Holakouie Naieni K, Mohammad K, Majdzadeh SR. The World Health Organization quality of Life (WHOQOL-BREF) questionnaire: Translation and validation study of the Iranian version. *sjsph*. 2006;**4**(4):1-12.
20. Makvandi B, Haydarei AR, Shehni Yailagh M, Najarian B, Askery P. Construction and validation of a scale for the measurement of alexithymia in university student. *Journal of American Science*. 2011;**7**(12):325-29.
21. Silvera DH, Martinussen M, Dahl TI. The Tromsø Social Intelligence Scale, a self-report measure of social intelligence. *Scand J Psychol*. 2001;**42**(4):313-9. doi: 10.1111/1467-9450.00242. [PubMed: 11547906].
22. Rahimi H, Eftekhari HS. A Study of Social Intelligence in Students at Kashan University of Medical Sciences During Year 2015. *Journal of Nursing Education*. 2016;**5**(3):41-6. doi: 10.21859/jne-05036. Persian.
23. Rezaie A. The Tromsø Social Intelligence Scale: Factorial Structure and Reliability of the Persian Version of Scale in the Students Population. *Journal of Modern Psychological Researches*. 2011;**5**(20):65-82.
24. Aslami N, Khayer M, Hashemi L. Relationship between perfectionism and social-anxiety in regard to self-esteem role as a mediator among the third-grade high school students in Shiraz. *Journal of Instruction and Evaluation*. 2013;**6**(23):105-21. Persian.
25. Knapp ML, Daly JA. Interpersonal Communication. Sage benchmarks in communication. London: SAGE Publications; 2010. doi: 10.4135/9781446262238.
26. Hooda D, Sharma NR, Yadava A. Social intelligence as a predictor of positive psychological health. *Journal of the Indian Academy of Applied Psychology*. 2009;**35**(1):143-50.
27. Panayiotou G, Leonidou C, Constantinou E, Michaelides MP. Self-Awareness in alexithymia and associations with social anxiety. *Current Psychology*. 2018;1-10.
28. Ertekin E, Koyuncu A, Ertekin BA, Özyıldırım İ. Alexithymia in social anxiety disorder: is there a specific relationship or is it a feature of comorbid major depression? *Anadolu Psikiyatri Dergisi*. 2015;**16**(2):130-137. doi: 10.5455/apd.153110.
29. Abbasi F, Shariati K, Tajikzadeh F. Comparison of the Cognitive Behavioral Therapy (CBT) and Mindfulness-Based Stress Reduction (MBSR): Reducing Anxiety Symptoms. *Women Health Bull*. 2018;**5**(4):1-5. doi: 10.5812/whb.60585.
30. Hampel S, Weis S, Hiller W, Witthöft M. The relations between social anxiety and social intelligence: a latent variable analysis. *J Anxiety Disord*. 2011;**25**(4):545-53. doi: 10.1016/j.janxdis.2011.01.001. [PubMed: 21315550].
31. Nolidin K, Downey LA, Hansen K, Schweitzer I, Stough C. Associations between social anxiety and emotional intelligence within clinically depressed patients. *Psychiatr Q*. 2013;**84**(4):513-21. doi: 10.1007/s11126-013-9263-5. [PubMed: 23632828].
32. Nikolić M, van der Storm L, Colonnaesi C, Brummelman E, Kan KJ, Bögels S. Are Socially Anxious Children Poor or Advanced Mindreaders? *Child Dev*. 2019;**90**(4):1424-1441. doi: 10.1111/cdev.13248. [PubMed: 31099053]. [PubMed Central: PMC6852401].
33. Doherty M. Theory of mind: How children understand others' Thoughts and feelings. 1st ed. New York: Psychology Press; 2008. doi: 10.4324/9780203929902.

34. Rapaport MH, Clary C, Fayyad R, Endicott J. Quality-of-life impairment in depressive and anxiety disorders. *Am J Psychiatry*. 2005;**162**(6):1171-8. doi: 10.1176/appi.ajp.162.6.1171. [PubMed: 15930066].
35. Wong N, Sarver DE, Beidel DC. Quality of life impairments among adults with social phobia: the impact of subtype. *J Anxiety Disord*. 2012;**26**(1):50-7. doi: 10.1016/j.janxdis.2011.08.012. [PubMed: 21964285]. [PubMed Central: PMC3254860].
36. Li YN, Shapiro B, Kim JC, Zhang M, Porszasz J, Bross R, et al. Association between quality of life and anxiety, depression, physical activity and physical performance in maintenance hemodialysis patients. *Chronic Dis Transl Med*. 2016;**2**(2):110-119. doi: 10.1016/j.cdtm.2016.09.004. [PubMed: 29063031]. [PubMed Central: PMC5643749].