



The Effect of Emotional Intelligence on the Quality of Life of Mothers of Children with Autism

Hossein Alibakhshi,¹ Fatemeh Mahdizadeh,¹ Mona Siminghalam,^{1,*} and Raheb Ghorbani²

¹MCS, Rehabilitation Faculty, Semnan University of Medical Sciences, Semnan, Iran

²Social Determinants of Health Research Center, Faculty of Medicine, Semnan University of Medical Sciences, Semnan, Iran

*Corresponding author: Mona Siminghalam, Rehabilitation Faculty, Semnan University of Medical Sciences, Semnan, Iran. Tel: +98-2333654180, E-mail: monasiminghalam@yahoo.com

Received 2017 May 03; Revised 2018 January 21; Accepted 2018 January 27.

Abstract

Background: Having a child with autism spectrum disorder is a stressful event for parents. Mental health status of the parents of children with chronic disabilities has a considerable impact on welfare and development of their children. The present study aimed to investigate the relationship between emotional intelligence and quality of life in mothers of children with autism.

Methods: In this descriptive analytic study, 50 mothers of children with autism, with the mean age of 33.9 years (SD = 6.8), referred to autism clinics in Tehran, were selected using convenience sampling method. Health-related quality of life was assessed using the Iranian version of the short-form health survey (SF-36) and the emotional intelligence was measured by the Iranian version of H-Wesinger emotional intelligence inventory.

Results: Given the findings, there was a significant correlation between the scores of quality of life and the emotional intelligence ($r = 0.304$, $P = 0.032$). Also, there existed a significant correlation between the subscale tests in the physical performance ($r = 0.286$, $P = 0.044$) and the Mental health ($r = 0.293$, $P = 0.032$).

Conclusions: The current study showed that the quality of life in mothers of children with ASD could be affected by emotional intelligence and the increased emotional intelligence is a factor to promote the quality of life. In addition, there is a positive relationship between emotional intelligence, mental health, and physical performance. High emotional intelligence is effective in improving the status of these 2 areas.

Keywords: Emotional Intelligence, Quality of Life, Autism Spectrum Disorder

1. Background

Autism spectrum disorder (ASD) is a neurological and developmental disorder that begins early in the childhood and lasts throughout a person's life, characterized via the repetitive and restricted interests and activities, the communicative problems, and the abnormal skills in social interactions (1). Due to the increased prevalence of ASD, studies regarding their parent's health and well-being status have been increased. Recent studies show that 1 in every 50 school-age children suffers from autism in the United States (2). Children with ASD have a variety of behavioral problems such as stereotypy, Self-stimulatory behavior, aggression, and echolalia. Such behaviors create some problems in training and protecting as well as create a lot of stress in parents, especially on mothers. This disorder makes the undesirable impacts on family life; anxiety, stress, isolation, and uncertainty are observed among the parents and siblings of children with ASD (3).

During life, parents are considered as the most important people in their child's life. In fact, parents play a major role in the development of their children's cognitive, social, and educational skills. Studies have shown that the parents' mental health has a considerable impact on the

development and welfare of their children with chronic disabilities (4). Extensive studies have been carried out about the influence and effects of having a child with ASD on the parents' different aspects of life. In addition, it has been found that various aspects of their lives, including the economic situation and mental, social, and physical health have been influenced (5). Therefore, the condition of mental and physical health of parents plays the important role in improving the process and the results of therapeutic interventions (4).

Furthermore, children with ASD create a stressful occasion in their family and reduce the quality of life in parents, especially in mothers (1, 3, 6, 7). Quality of life as defined by the world health organization (1995) and refers to the individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns. It is a broad-ranging concept affected in a complex way by the individual's physical health, psychological state, level of independence, social relationships, as well as their relationships to salient features of their environment (8). Emotional intelligence (EQ) is a set of capabilities associated with emotions and to process the emotional data.

In fact, it is a kind of ability to use the emotions in mind (9, 10). The positive impact of EQ in controlling stress is that the physical and mental health has been identified (11, 12).

It has been also observed that the EQ has the positive impact on communication patterns and the relationship satisfaction (13). In addition, life satisfaction is under the influence of the EQ (14). In a study conducted by Fernandez et al., in 2015, studied on 855 undergraduate students (188 women and 668 males) aimed at examining the dimensions of EQ related to the behavioral mental and physical health using trait meta-mood scale, health behavior checklist, Trait EQ questionnaire, and SF-36 questionnaires; the result showed that all dimensions of the EQ, except the attention, have a positive relationship with preventive health behaviors (11). Kohthalo et al., who studied 224 parents aimed at evaluating the quality of life of the parents with the ASD children using the questionnaires of 6 dimension short-form health survey and 5 dimension Euro quality of life. The results showed that their parents were depressed and also had lower scores in quality of life than ordinary people (15). Dardas et al., performed a study on 426 parents with ASD children and aimed at evaluating their quality of life using the world health organization quality of life assessment-brief questionnaire. The result showed that these parents had a low level of quality of life (6).

Therefore, considering the importance of the quality of life and mental health, the impact of the EQ on the quality of life of mothers with ASD children was investigated. If the relationship between these 2 items was proved, the new solutions could be found to train the parents to promote the EQ and the quality of life. The results of this study can be helpful to identify the vulnerable groups in the community. The reason to choose these mothers was due to the inevitable differences in their lifestyle compared with the other people and the existence of intermittent stressors in their lives.

In addition, this study can be useful in the field of policy making, planning in education, in health, and in treatment to maintain and improve the quality of life of mothers of children with ASD. Furthermore, it could also be helpful for the authorities, relevant providers, as well as organizations, and can be useful to reduce the costs imposed to the family and the community in mental health.

2. Methods

This is a correlation study carried out in Tehran. The study population was selected among the mothers of the ASD children, who referred to Tehran rehabilitation clinics, and were confirmed by a child psychiatrist. A total of 50 mothers of children with ASD were selected by default using the convenience sampling method. The inclusion crite-

ria were the age of over 18 years and a child with autism. Exclusion criteria included a history of physical or mental disease, having another disabled child, the questionnaire had no required specifications or it was not fully completed, and the authenticity of the information in the questionnaire was doubtful. To collect the data, the Iranian version of the quality of life questionnaire (SF-36) and the H-Weisinger's emotional intelligence was used. Furthermore, after approving the proposal and getting confirmation from the ethics committee in Semnan University of Medical Sciences (reference number: SEMUMS.REC.1394.49), the samples were selected for the study. The objectives of the study and the items in the questionnaire were explained for participants after the necessary coordination and selection of the sample. After completing the consent form, participants completed the quality of life questionnaire (SF36) and EQ.

Meanwhile, the individual and clinical information were completed by the interviewer. Quality of life and EQ items were filled out by each mother. If the case was illiterate or could not read and write, the questionnaire was completed by a person accompanying her.

Data analysis and the relationship between the score of the quality of life and the EQ score were determined via Spearman correlation coefficient. SF-36 questionnaire for quality of life and the emotional intelligence questionnaire were used in this study.

SF-36 questionnaire contains 36 items. It is a good scale for the individual's perception of his/her own health status and contains the 8 subscale tests related to the health and includes the physical performance, physical role, physical pain, social performance, emotional role, general health, vitality, and mental health. It was obvious that the higher the score the individual obtained, the higher quality of life she/he got. It should be noted that the Likert scale was used for scoring (16). Researches showed that this questionnaire had a high reliability and high validity. The internal consistency showed that all 8 SF-36 scales met the minimum reliability standard, the Cronbach's alpha coefficients ranging from 0.77 to 0.90 with the exception of the vitality scale (alpha = 0.65) (17).

2.1. Intelligence Questionnaire

To evaluate the EQ, H-Weisinger questionnaire was used. The emotional intelligence questionnaire includes 25 questions measuring EQ. The score of each person ranges from 25 to 125 based on Likert's five-point scale (I totally agree, somehow I agree, neither I agree nor disagree, somehow I disagree, totally I disagree). Based on the scale, scoring less than 50 to 100 show intermediate level and higher than 100 indicating the high EQ. The EQ consists of 5 dimensions; self-consciousness, self-management, self-

motivation, empathy, and social skills. Each of them contains 5 items of 25 (18). The questionnaire also contains validity and reliability ($ICC = 0.91$) (19). Also, according to Shiri's study et al., this is a universal and standard questionnaire with a high level of validity (20).

2.2. Statistical Analysis

All the collected data were analyzed via SPSS-19. Pearson correlation test was used to examine the relationship between the studied variables.

3. Results

The number of cases included 50 mothers with ASD children. The mean age of mothers was 33.9 years; 82% of them lived with their husbands and the rest were divorced or had a futile spouse. The mean of the number of children was 2.2.

In total, 48% (24 cases) did not have any healthy children while 32% (16 cases) had only 1 healthy child. A total of 4 cases (8%) had 2 healthy children and 6 cases (12%) had 3 or more than healthy children. Of the mothers, 64% were housewives and the rest were employed. 68% had a university education. In regards to income, 34% of families were at the low-income, 64% with an average income, and 2% were at high-income levels. According to the results of the statistical analysis, the mean of EQ in the community was 82.8 and the standard deviation was 10.5. Also, the mean of quality of life was 51.2 and its standard deviation was 15.7.

Table 1 Showed the correlation between EQ and the quality of life. There was a significant positive correlation between the scale score of quality of life and EQ ($r = 0.304$, $P = 0.032$). This relationship was also shown between EQ and physical performance subtest ($r = 0.286$, $P = 0.044$) as well as the Mental health subtest ($r = 0.293$, $P = 0.032$). However, there was no meaningful relationship between EQ and other areas of quality of life. The correlation coefficient between physical role functioning and EQ was 0.169 ($P = 0.242$). The correlation coefficient between emotional role functioning and EQ was 0.094 ($P = 0.517$). The correlation coefficient between vitality and EQ was 0.165 ($P = 0.253$). The correlation coefficient between social role functioning and EQ was 0.215 ($P = 0.134$). The correlation coefficient between bodily pain and EQ was 0.177 ($P = 0.218$). The correlation coefficient between general health perceptions and EQ was 0.104 ($P = 0.473$). The correlation coefficient between health change and EQ was 0.194 ($P = 0.173$).

4. Discussion

This study was conducted to investigate the relationship between EQ and quality of life among the mothers of

ASD children in Tehran. According to the results of the statistical analysis, the hypothesis of this study has been confirmed; that is, the level of EQ is related to the quality of life among mothers with ASD children. Furthermore, the higher the level of EQ is, the higher the quality of life will be. Although, relationship with EQ was not observed in all of the Sf-36 subtests, it was only observed in the physical function and mental health subtests. This result may be due to the limited statistical population in this study. Damage to the quality of life in the group of mothers of ASD children has been shown in various studies (1, 3, 6, 7, 15, 21, 22). The quality of life in damaged families with severe disabilities can be adjusted through various factors such as the social support, socioeconomic condition, and the adaptive strategies (23).

Khayat-zadeh studied the factors affecting the quality of life among mothers with ASD children in Iran, and concluded that the socio-economic conditions, marital satisfaction, and the severity of disorder for child affected the mothers' quality of life, while the severity of the child's disorder has further effects on the quality of life (7).

Given that the definition of EQ briefly includes the recognition and control of the emotions (10), it can be concluded that the greater the EQ is, the emotional dominance increases. Furthermore as a result, one will have the more rational approach to the problems. There are various studies showing the relationship between the overall EQ and the physical and mental health (24). Other studies show the effect of EQ on life satisfaction as well as the increased EQ being a factor to promote life satisfaction (14).

The present study showed that the mothers' quality of life with autistic children is influenced by the and the increased EQ is a factor to promote the quality of life. In this study, it can be concluded that any intervention to increase the mothers' EQ can be effective to improve the quality of life and mental health. Thus, it is suggested that along with the social support, interventions need to be done to increase EQ in order to promote the life satisfaction and consequently, mental health impairments will be lowered.

One of the limitations of this research is the lack of a sufficient sample of non-cooperation by families to complete the questionnaire and the lack of integrity in providing personal information. The lack of correlation between EQ and other sub-tests of SE 36 may be due to this limitation.

4.1. Conclusion

It can be concluded that the study of the EQ level and the quality of life among the mothers with ASD children, considering that the mother is a member of the family and has the closest relationship with these children, is very effective and helps the family accept the autistic child. Fur-

Table 1. The Correlation Between EQ and the Different Domains of Quality of Life of Mothers with Autism Spectrum Disorder Children, Tehran (2015)

Variables	Mean (SD)	P Value	Correlation Coefficient
Physical function	53.6 (26.5)	0.044	0.286
Physical role functioning	44 (41.3)	0.244	0.169
Emotional role functioning	42.7 (39.3)	0.517	0.094
Vitality	55.4 (17.9)	0.253	0.165
Mental health	48 (13.4)	0.039	0.293
Social role functioning	55.3 (20.9)	0.134	0.215
Bodily pain	50 (30.6)	0.218	0.177
General health perceptions	54.6 (13.0)	0.473	0.144
Health changes	56.5 (27.6)	0.173	0.194
Scale score	51.2 (15.7)	0.032	0.304

thermore it also helps the parents have a proper adaptation to the conditions of the child, and consequently, it has a favorable effect on the family system.

Given the influence of EQ in the quality of life among mothers of ASD children, consultation will be effective. Thus, the parents are advised to take actions in order to benefit the level of mental health and to increase the quality of family life. On the other hand, it is advisable to parents to have the logical responses to this issue and consider a proper education for their children as well as follow the therapeutic approaches for child's development along with taking the positive steps in keeping the mental health of the family. Finally, it is suggested to further study the impact of different variables such as age, education level, employment status, marital status, and economic status on the quality of life of mothers of autistic children.

Acknowledgments

We would like to thank the student research committee in Semnan University of Medical Sciences as well as those who provided the necessary funding to implement this project. We also appreciate all mothers who helped us honestly. This article is the result of the research N0 856 approved by the student research committee in Semnan University of Medical Sciences.

Footnote

Funding/Support: Student research committee, Semnan University of Medical Sciences, Semnan, Iran

References

- Allik H, Larsson JO, Smedje H. Health-related quality of life in parents of school-age children with Asperger Syndrome or High-Functioning Autism. *Health Qual Life Outcomes*. 2006;4:1. doi: [10.1186/1477-7525-4-1](https://doi.org/10.1186/1477-7525-4-1). [PubMed: [16393335](https://pubmed.ncbi.nlm.nih.gov/16393335/)].
- Blumberg SJ, Bramlett MD, Kogan MD, Schieve LA, Jones JR, Lu MC. Changes in prevalence of parent-reported autism spectrum disorder in school-aged U.S. children: 2007 to 2011-2012. *Natl Health Stat Report*. 2013;(65):1-11. 1 p following 11. [PubMed: [24988818](https://pubmed.ncbi.nlm.nih.gov/24988818/)].
- Conner CM, White SW. Stress in mothers of children with autism: Trait mindfulness as a protective factor. *Res Autism Spectr Disord*. 2014;8(6):617-24. doi: [10.1016/j.rasd.2014.02.001](https://doi.org/10.1016/j.rasd.2014.02.001).
- Carrington SJ, Kent RG, Maljaars J, Le Couteur A, Gould J, Wing L, et al. DSM-5 Autism Spectrum Disorder: In search of essential behaviours for diagnosis. *Res Autism Spectr Disord*. 2014;8(6):701-15. doi: [10.1016/j.rasd.2014.03.017](https://doi.org/10.1016/j.rasd.2014.03.017).
- Hartley SL, Barker ET, Seltzer MM, Floyd F, Greenberg J, Orsmond G, et al. The relative risk and timing of divorce in families of children with an autism spectrum disorder. *J Fam Psychol*. 2010;24(4):449-57. doi: [10.1037/a0019847](https://doi.org/10.1037/a0019847). [PubMed: [20731491](https://pubmed.ncbi.nlm.nih.gov/20731491/)].
- Dardas LA, Ahmad MM. Quality of life among parents of children with autistic disorder: a sample from the Arab world. *Res Dev Disabil*. 2014;35(2):278-87. doi: [10.1016/j.ridd.2013.10.029](https://doi.org/10.1016/j.ridd.2013.10.029). [PubMed: [24316492](https://pubmed.ncbi.nlm.nih.gov/24316492/)].
- Khayatadeh Mahani M, Rostami HR, Nejad SJ. Investigation of quality of life determinants among mothers of children with pervasive developmental disorders in Iran. *Hong Kong J Occupational Therapy*. 2013;23(1):14-9. doi: [10.1016/j.hkjot.2013.03.002](https://doi.org/10.1016/j.hkjot.2013.03.002).
- Felce D, Perry J. Quality of life: its definition and measurement. *Res Dev Disabil*. 1995;16(1):51-74. [PubMed: [7701092](https://pubmed.ncbi.nlm.nih.gov/7701092/)].
- Vergara AI, Alonso-Alberca N, San-Juan C, Aldás J, Vozmediano L. Be water: Direct and indirect relations between perceived emotional intelligence and subjective well-being. *Australian J Psychol*. 2015;67(1):47-54. doi: [10.1111/ajpy.12065](https://doi.org/10.1111/ajpy.12065).
- Bar-On RE, Parker JD. *The handbook of emotional intelligence: Theory, development, assessment, and application at home, school, and in the workplace*. Jossey-Bass; 2000.
- Fernandez-Berrocá P, Cabello R. Commentary: Dimensions of emotional intelligence related to physical and mental health and to health behaviors. *Front Psychol*. 2016;7:441. doi: [10.3389/fpsyg.2016.00441](https://doi.org/10.3389/fpsyg.2016.00441). [PubMed: [27065912](https://pubmed.ncbi.nlm.nih.gov/27065912/)].
- Slaski M, Cartwright S. Health, performance and emotional intelligence: an exploratory study of retail managers. *Stress Health*. 2002;18(2):63-8. doi: [10.1002/smi.926](https://doi.org/10.1002/smi.926).

13. Lopes PN, Salovey P, Straus R. Emotional intelligence, personality, and the perceived quality of social relationships. *Personal Individ Differ*. 2003;**35**(3):641-58. doi: [10.1016/s0191-8869\(02\)00242-8](https://doi.org/10.1016/s0191-8869(02)00242-8).
14. Palmer B, Donaldson C, Stough C. Emotional intelligence and life satisfaction. *Personal Individ Differ*. 2002;**33**(7):1091-100. doi: [10.1016/s0191-8869\(01\)00215-x](https://doi.org/10.1016/s0191-8869(01)00215-x).
15. Kuhlthau K, Payakachat N, Delahaye J, Hurson J, Pyne JM, Kovacs E, et al. Quality of life for parents of children with autism spectrum disorders. *Res Autism Spectr Disord*. 2014;**8**(10):1339-50. doi: [10.1016/j.rasd.2014.07.002](https://doi.org/10.1016/j.rasd.2014.07.002).
16. Ghafari R, Rafiei M, Taheri Nejad MR. Assessment of health related quality of life by sf-36 version 2 in general population of Qom city. *Arak Med Univ J*. 2014;**16**(11):63-72.
17. Montazeri A, Goshtasebi A, Vahdaninia M, Gandek B. The Short Form Health Survey (SF-36): translation and validation study of the Iranian version. *Qual Life Res*. 2005;**14**(3):875-82. [PubMed: [16022079](https://pubmed.ncbi.nlm.nih.gov/16022079/)].
18. Weisinger H, Cali RLL. *Emotional intelligence at work: The untapped edge for success*. Wiley Online Library; 1999.
19. Mortazavi S, Nazemi S. An empirical study of the relationship between emotional intelligence and leadership style (transformational-transactional). *Modares J Manag Res in Iran*. 2010;**(9)**:167-90.
20. Mousavi Shiri SM, Bakhshian A, Barati H. Emotional intelligence effect on the quality of decision making by investors in the stock exchange. *J Invest Knowledge*. 2015;**5**(17):99-112.
21. Yamada A, Kato M, Suzuki M, Suzuki M, Watanabe N, Akechi T, et al. Quality of life of parents raising children with pervasive developmental disorders. *BMC Psychiatry*. 2012;**12**:119. doi: [10.1186/1471-244X-12-119](https://doi.org/10.1186/1471-244X-12-119). [PubMed: [22906177](https://pubmed.ncbi.nlm.nih.gov/22906177/)].
22. Mugno D, Ruta L, D'Arrigo VG, Mazzone L. Impairment of quality of life in parents of children and adolescents with pervasive developmental disorder. *Health Qual Life Outcomes*. 2007;**5**:22. doi: [10.1186/1477-7525-5-22](https://doi.org/10.1186/1477-7525-5-22). [PubMed: [17466072](https://pubmed.ncbi.nlm.nih.gov/17466072/)].
23. Raina P, O'Donnell M, Schwellnus H, Rosenbaum P, King G, Brehaut J, et al. Caregiving process and caregiver burden: conceptual models to guide research and practice. *BMC Pediatr*. 2004;**4**:1. doi: [10.1186/1471-2431-4-1](https://doi.org/10.1186/1471-2431-4-1). [PubMed: [14723791](https://pubmed.ncbi.nlm.nih.gov/14723791/)].
24. Fernandez-Abascal EG, Martin-Diaz MD. Dimensions of emotional intelligence related to physical and mental health and to health behaviors. *Front Psychol*. 2015;**6**:317. doi: [10.3389/fpsyg.2015.00317](https://doi.org/10.3389/fpsyg.2015.00317). [PubMed: [25859229](https://pubmed.ncbi.nlm.nih.gov/25859229/)].