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ORIGINAL ARTICLE

Comparison of quality of life of mothers with healthy children and mothers of children with congenital heart disease after open heart surgery

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Abstract

Introduction: Congenital cardiac abnormalities are among the problems that affect the quality of life of children and parents, especially the mothers. Meanwhile, mothers are severely stressed and harmed due to their emotions and feelings, so that the suffering can reduce their quality of life. This study aimed to compare the quality of life of mothers of healthy children and mothers of children with congenital heart disease after cardiac surgery.

Methods: This is a cross-sectional descriptive-analytic study where 100 mothers of healthy children and 60 mothers of children with congenital heart disease referring to Vali-e-Asr Hospital in 2016 and 2017 were incorporated. The mothers' quality of life was assessed using the World Health Organization Quality of Life Scale (WHOQOL-BREF). The collected data was analyzed in SPSS software (version 22) using independent t-test, Mann-Whitney, Kruskal-Wallis and Chi-square. The significance level for all tests was considered less than 0.05.

Results: According to the findings, the mean age of mothers with healthy children was 31.91 ± 8.57 years and that of mothers of children with congenital heart disease was 32.48 ± 6.46 years. The mean score of the quality of life of mothers with healthy children was 71.25 ± 16.43 and that of the second group was 66.51 ± 15.46. The mean scores of social relationships, mental health, and physical health in mothers with healthy children were significantly higher than those of mothers after their child's surgery. However, there was no significant difference between the two groups as for the mean score of overall quality of life and environmental health.

Conclusions: According to the results, it was found that the quality of life of the mothers with unhealthy children is lower than that of mothers with healthy children. Therefore, proper training and timely counseling are recommended as potential measures to somewhat improve their quality of life.

Key Words: Quality of life; Operation; Congenital heart disease; Mothers; Postoperative

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Introduction

Congenital heart diseases (CHDs) is one of the main causes of death in the early years of life and is one of the main causes of physical and mental disability in the parents (1). The exact cause of CHDs is unknown, yet among the very frequent causes are ventricular septal defect (VSD), atrial septal defect (ASD), aortic stenosis (AS), pulmonary valve stenosis (PS), and coarctation of the aorta. About half of these diseases can be detected in the first week of birth (2). Given the advancement of science and the use of advanced techniques, the mortality rate of these children has reduced in recent decades (3). CHDs causes physical, mental, and economic problems for children and their parents as well as economic and cultural burden on the society in large (4).

Today, the assessment of the quality of life (QOL) of children and their parents is discussable in clinical research because change in treatment or counseling can affect this quality (5). The World Health Organization defines the QOLof individuals as the set of their perceptions of life according to the norms and values of the society in which they live in relation to the goals and priorities of the individuals (6). The parents of these children, especially the mothers, suffer from the anxiety, stress and psychological problems arisen from the uncertain future of their children, their treatment and prognosis (4). Therefore, it is necessary to justify these parents psychologically. Factors such as the personality of the caregiver, the socioeconomic status of the parents, and their ways of coping with tension can affect their QOL (7).

As yet, several studies have been conducted on the QOL of mothers with children suffering from thalassemia major, asthma, and diabetes (8, 9, 10). Considering the limited number of studies on the QOL of mothers with CHDs children, this study aims to evaluate and compare life quality of mothers of healthy children and mothers of CHDs children after open heart surgery in Birjand city.

Methods

This descriptive-analytic study was conducted to evaluate and compare the QOL of mothers with healthy children and mothers of CHDs children after surgery. For this purpose, the World Health Organization QOL (WHOQOL) scale was used, which measures the overall and general QOL of an individual. This scale holds 26 items on the Likert scale and has 4 subscales of physical health, mental health, social relationships, and environmental health with an overall score. The validity and reliability of the brief version (26 items) adapted from the original scale (holding 100 items) have recently been confirmed by a group of Iranian scholars after translation into Persian. Nonetheless, the validity of the instrument was reassessed by content validity method. The result of content validity in the three areas of relevance, clarity and fluency was 0.8. The reliability of the instruments was assessed using Cronbach's alpha coefficient, whereby the coefficient for the WHOQOL-BREF was 0.80 and that of the psychological status questionnaire was 0.87 (11).

The inclusion criteria for the study comprised of mother's informed consent; presence of proved heart disease in the individual under the age of 18 years; the need for cardiac surgery; and literacy of the mother. Exclusion criteria consisted of mental instability in the mother; presence of excessive obesity, asthma, or any disease that interfered with the QOL of mothers.

The collected data were analyzed in SPSS software (version 22) using the central tendency and dispersion indexes, independent t-test, Mann-Whitney, Kruskal Wallis and Ch-square. The significant level for all tests was considered to be less than 0.05.

Results

In this study, the QOL of 100 mothers with healthy children and 60 mothers of CHDs children after operation was studied. The mothers aged between 18 and 57 years, and the mean age of mothers with healthy children and mothers of CHDs children were respectively 31.91 ± 8.57 and 32.48 ± 6.46 years. Mean score of QOL of mothers with healthy children was 71.25 ± 16.43 and that of mothers with CHDs children after surgery was 66.50 ± 15.45.

Table-1. Shows the education and employment status of mothers in the two groups. Ninety percent of mothers with CHDS children were housewives; only one was self-employed and 8% were employees. The education level and employment status of mothers in two groups were significantly different so that the education level of mothers with healthy children was higher and about half of them were employed, whereas only 10% of mothers with CHDs children after surgery were employed.

Using the Kolmogorov-Smirnov test, the normality of scores in the subscales of QOL was

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Table 1: Frequency distribution of demographic variables in mothers with healthy children and mothers of children with congenital heart disease after surgery

Variables		Mothers with healthy children	Mothers of children with congenital heart disease after cardiac surgery	P-value (Chi-Square)
Education	Primary or secondary	16.5	44	0.002*
	High school diploma	40.7	30	
	Tertiary	42.8	26	
Employment	Housewife	53.3	90	<0.001*
	Employee	32.6	8	
	Self-employed	14.1	2	

Table 2: Comparison of QOL in mothers with healthy children and mothers of children with CHDs after cardiac surgery

Variables		Median (Q1-Q3)	P-value
Social relations	mothers with healthy children	66.67 (33-58.75)	0.022*
	mothers of CHDs children after surgery	66.67 (50-75)	
Mental health	mothers with healthy children	64.58 (17-54.75)	0.04*
	mothers of CHDs children after surgery	62.50 (50.67-66)	
Physical health	mothers with healthy children	64.29 (14-57.75)	<0.001*
	mothers of CHDs children after surgery	53.57 (43.14-46.57)	
Overall life quality	mothers with healthy children	75 (5.5-62.87)	0.07
	mothers of CHDs children after surgery	75 (5-62.75)	
	Variable	Mean (±SD)	P-value (t-test)
Environmental health	mothers with healthy children	65.18 (13±0.88)	0.085
	mothers of CHDs children after surgery	52.57 (10±0.38)	

tested, where only the environmental health score had a normal distribution. Therefore, independent t-test was used for this variable, while the Mann-Whitney nonparametric test was used for other sub-scales.

As it can be seen in Table-2, the median scores for social relationships, mental health, and physical health in mothers with healthy children are significantly higher than those of mothers with CHDs children after their child's surgery. However, there was no significant difference in the mean scores of overall QOL and environmental health.

Using Kruskal-Wallis test, the QOL of mothers had no significant association with educational level (P=0.243) and their occupation (P=0.381).

Discussion

Presence of any disease affects various aspects of the patient's life. Yet, the same disease can affect various dimensions of the life of those around the patient. In case the disease is in children, their parents, especially the mother, will be affected from different aspects (12,13,14).

The results of Khayatzadeh et al.'s (2009) study showed that the QOL of mothers with cerebral palsy is lower than that of mothers of normal children (15). Their results are not consistent with the results of our study however as no significant difference could be found between the QOL of the mothers with healthy children and that of mothers of CHDs children after the open heart surgery.

The study by Alavi et al. (2005) compared the QOL of parents with thalassemic children and life quality of children with thalassemia major. It was shown that adolescents with thalassemia have problems with quality of life, especially in physical and emotional dimensions. Also, parents of these children have a low quality of life. The PedSQL QOL scale was used in their study for which higher scores indicate greater problems and lower quality of life. The results of this study were not consistent with the results of our study (9).

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Also, the results of our study are not consistent with the results of the studies by Kiani and colleagues about Children with cerebral palsy (2011) and Kkanjari and colleagues about leukemia (2013). These two studies also stated that the QOL of mothers with healthy children is higher than that of mothers with unhealthy children. Nonetheless, the results of our study showed that the QOL of mothers of CHDs children after operation was not significantly different from that of mothers of healthy children (16, 17).

The results of our study showed that the median score of social relationships, mental health, and physical health in mothers with healthy children was significantly higher than that of mothers of CHDs children after surgery. The mothers in our study were compared in terms of their level of education and occupation. There was no significant relationship between the level of education and employment status of mothers and their QOL; in this regard, our study does not correspond with studies by Khanjari et al and Khayatzadeh et al. Perhaps the reason for this is that the education level and employment cannot reduce stress or increase living standard of mothers.

Conclusions

The results showed that the mothers of the unhealthy children are of a similar QOL to that of the mothers of healthy children. This could be due to the following reasons: elimination of mother's worries about the future of her child as well as her concern with the treatment process; provision of the required information to the mother by the doctor and the medical staff; payment of the exorbitant financial expenses by insurance companies; fulfillment of the needs of the child by the medical staff; and many other things. Therefore, it is recommended to improve the QOL of these mothers via interventional procedures such as counseling and training.

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Conflict of Interest

The authors declare that they have no conflict of interest.

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