Depression, Anxiety and Quality of Life of Mothers in the Early Postpartum Period

Gulseren Daglar[1], Dilek Bilgic[2], Semiha Aydın Özkan[3]

[1]Assistant Professor, Cumhuriyet University, Faculty of Health Sciences Department of Midwifery, Sivas, Turkey
[2]Assistant Professor, Dokuz Eylul University, Faculty of Nursing, Obstetric and Gynecologic Nursing, İzmir, Turkey.
[3]Assistant Professor, Adıyaman University School of Health, Midwifery Department, Adıyaman, Turkey

Corresponding Author:
Semiha Aydın Özkan,
Assistant Professor,
Adıyaman University School of Health
Midwifery Department
Adıyaman, Turkey
E-mail:semihaaydin44@gmail.com

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Abstract

Introduction: The aim of this study was to investigate the relationship between the anxiety, depression and quality of life levels of mothers in the early postpartum period.
Methods: A cross-sectional study was conducted with 162 mothers consulting to Family Health Centers (FHCs) during the first week of postpartum. The present study was conducted through face to face interviews with participants using a pencil and questionnaire form in 6 FHCs selected among 24 FHCs using cluster sampling method. Personal Introduction Form, Centre for Epidemiological Studies Depression Scale, Beck Anxiety Inventory and the World Health Organization Quality of Life Scale were filled out for those who accepted to participate in the study.
Results: Postpartum depression risk was found to be 33.3% and the average anxiety score was found 11.12±7.58. There was a significant negative correlation between the average scores of the level of depression and anxiety, and the sub-dimensions of the Quality of Life Scale. Postpartum depression and anxiety level negatively affect postpartum quality of life. As the depression and anxiety levels of the mothers increased in the postpartum period, the quality of life of the psychological, physical, social and national sub-scales were affected negatively.
Conclusion: As the depression and anxiety levels of mothers in the postpartum period increased, the psychological, physical, social and national sub-scales of the Quality of Life Scale were affected negatively.

Keywords: Anxiety, Depression, Quality of Life, Postpartum Period, Midwifery

Introduction

Pregnancy and delivery described as developmental crisis have an important role in the life of women as they cause certain physiological, psychological and social changes. In the postpartum period that starts upon delivery and covers a period of 6 weeks, numerous physiological and psychological factors such as energy level, comfort of the mother, health of the new-born baby, quality of the healthcare and support received affect the adaptation of the mother to the postpartum period [1]. Postpartum period is a positive, satisfying period strengthening the family's ties while it can also turn into a crisis situation. In this period, mothers must learn about their new roles, establish communication with the baby, take care of the baby and cope with the problems related with the baby. Majority of women can adapt to the physiological, psychological and social changes arising with pregnancy and delivery while some women experience mental problems to a low, moderate and high extent [2]. Among these problems, particularly anxiety and depression could have negative effects on women during the delivery and postpartum period.

The World Health Organization (WHO) described the quality of life as "self-perception of individuals about life within the culture and values system they belong to". Quality of life can be subject to complex effects created by the physical health, mental health, and social

relations of a person, the level of independence and personal beliefs as well as the relationship of that particular individual with the environment [3]. Briefly, the quality of life is described as the perceived health. Therefore, the quality of life is not specific to any disease but it is a multi-dimensional concept used in an attempt to explain the effects of a disease on the patient [4].

Postpartum period is a process with social, emotional and physical changes that affect the quality of life of the new mother. Mothers have many concerns and they need information about self-care and baby care during this period. In this period, feelings such as stress, anxiety, loss of internal control, insufficient performance experienced by the mother have negative effects on her functional status and quality of life [5].

During this period, women need support in almost everything and they also need support of a midwife/nurse offering home care services although they meet their support requirements from their immediate family members. Midwives/nurses can provide contribution towards protecting health of the mother and the new-born baby, assume training and advisory roles towards its improvement, help mothers adapt to the role of motherhood, provide care and training towards maintaining personal health and taking care of the new-born baby and health completion of the postpartum period by the mother and the family [6]. Knowing the factors affecting the mental health of a woman in the postpartum period would help towards reducing such factors.

In addition, the literature includes a high number of studies about the level of depression, anxiety and the quality of life and factors affecting the postpartum period. However, there is limited number of studies analyzing the effects of the postpartum depression and anxiety on the quality of life of the mother in the postpartum period. Therefore, it is believed that there may be a correlation between the level of depression and anxiety, and the quality of life. The present study was conducted to determine the level of anxiety, depression and quality of life for mothers in the early postpartum period and also to establish the correlation between the postpartum anxiety and depression level and postpartum quality of life.

Methods

Women who resided in a city center, were in the postpartum period and who had a healthy baby, and who consulted to the Family Health Centre (FHC) for various reasons in the first week of the postpartum period formed the target group of the present study. The study was conducted in the first week of the postpartum period as Dennis suggests that depression scores measured in the 1st week of the postpartum period can be used to estimate the depression scores in the 4th and 8th weeks [7]. The study was conducted in 6 FHCs selected among 24 FHCs (1/4) by using cluster sampling method. There were 1374 women who had been registered in the 24 FHCs, and the study aimed to involve 175 mothers who were in the first week of the postpartum period and chosen from the 6 FHCs. The participants were162 mothers who had met the inclusion criteria. For the purpose of selecting the target group, women in the first week of the early postpartum period were selected among those who could speak Turkish, who had no sensory incapability that might hinder the communication and response and who accepted to participate in the study. The questionnaires were administered between the 1st of September and 30th of October 2015, and all the mothers (n=162) who met the research criteria were called for an interview. Mothers were interviewed for one time and the interview was conducted in an environment in FHC suitable for interview. During the interview, Personal Introduction Form, Centre for Epidemiological Studies Depression Scale (CES-D), Beck Anxiety Inventory (BAI) and the World Health Organization Quality of Life Scale (WHOQOL-BREF (TR)) were filled out for those who had accepted to participate in the study.

Personal Introduction Form

Personal Introduction Form included questions about certain socio-demographical characteristics (age, level of education) and obstetrical characteristics of the women (the number of pregnancy and children, willingness for pregnancy, gender preferences of the baby).

Center for Epidemiological Studies Depression Scale (CES-D)

The CES-D was planned to measure depressive symptoms and to determine people at risk of having a depressive disorder. The Turkish version of the CES-D, adapted into Turkish by Tatar and Saltukoglu, was used in the present study. The internal consistency of the scale was found to be between 0.75 and 0.90 in the different sections of the study [8]. It consisted of 20 items responded on a four-point Likert scale, with response categories ranging from 0 point, "rarely or never" to 3 points, "most or all the time" which are summed up to a total score where a higher score indicated more severe depressive symptoms. A cut-off score of ≥ 16 was usually accepted as an indicator of the clinically meaningful depressive symptoms.

Beck Anxiety Inventory (BAI)

Anxiety was assessed using the BAI. The BAI was designed by Beck et al. [9] to detect the frequency of symptoms of anxiety in adults and adolescents. The Turkish version of the BAI, was developed by Ulusoy et al. [10] who found the Cronbach's alpha value as 0.93. The inventory comprises of 21 items that described subjective, somatic, or panic-related symptoms of anxiety. Self-reported answers are based on a 4-point Likert scale ranging from responses of 'not at all' to 'severe' in terms of the experience of that symptom over the past month. Higher total scores indicate more severe levels of anxiety.

The World Health Organization Quality of Life Scale (WHOQOL-BREF (TR)

The Turkish version of the WHOQOL-BREF, which was developed by the WHO, was utilized. The WHOQOL-BREF includes physical health, psychological, social relationships, and environment and national environment sub-scales. Possible scores to be obtained from the sub-scales range from 0 to 20. Higher scores indicate higher quality of life. Reliability and validity of the Turkish version of the scale was performed by Eser et al. in 1999 [11]. Eser

et al. found a Cronbach's alpha coefficient as 0.83 for the physical health sub-scale, 0.66 for the psychological sub-scale, 0.53 for the social relationships sub-scale, 0.73 for the environmental sub-scale and 0.73 for the national environmental sub-scale [11].

The study was conducted according to the guidelines laid down in the Declaration of Helsinki, and this cross-sectional study was approved by the Research Review and Ethical Review Committees of Cumhuriyet University. A written informed consent was obtained from each participant before the beginning of the study.

Data were analyzed using Statistical Package for Social Sciences (SPSS for Windows 16.0). Descriptive statistics including mean and frequency distributions were calculated for categorical data. Associations between the variables were identified with the Student *t*-test, Kruskal Wallis Analysis of Variance, and Mann Whitney U test for quantitative data. Pearson correlation coefficients were also used to examine the associations between the CES-D, BAI and WHOQOL-BREF scores. Level of significance was taken at *p*-values less than 0.05.

Results

Descriptive Characteristics

The average age of 162 mothers in the first week of the postpartum period was 27.24±5.49 years, and 82.7% of the participants were in the 20 to 34 age group. Of all the mothers, 46.3% had high school and higher education degree, 59.9% lived in a nuclear family, 82.7% did not work, 61.1% perceived a balance in their income and expenditures, and 90.1% did not have a chronic disease. In addition, 37.7% of the mothers had three and more pregnancies, 58% planned their pregnancy, 77.8% had a healthy pregnancy period, 93.8% underwent regular pregnancy checks, 64.2% had normal vaginal delivery (NVD) and 62.3% had a baby with the gender they wished.

Postpartum Depression and Anxiety

Postpartum depression risk of mothers was found 33.3% (n=54), and average CES-D score was 13.03±9.65 (min-max: 0-56). The average BAI score was 11.12±7.58 (min-max: 0-39) and anxiety level was found low. Analysis of the factors affecting the postpartum depression of mothers based on their socio demographic and obstetric characteristics showed no significant statistical differences between the socio demographic characteristics and depression risk (Table 1).

Table 1. Comparison of the average scores of depression, anxiety and quality of life based on socio-demographical characteristics of mothers

Characteristics	CES-D	BAI	Quality of life Scale (WHOQOL-BREF)				
			Physical	Mental	Social	Environmental	National environmental
	$\bar{x}\pm S$	$\bar{x}\pm S$	$\bar{x}\pm S$	$\bar{x}\pm S$	$\bar{x}\pm S$	$\bar{x}\pm S$	$\bar{x}\pm S$
Age groups (Years)							
< 20 age a(n:8)	11.62±7.65	13.12±6.97	12.75±2.31	14.75±2.76	13.50±2.67	15.12±2.35	15.00±2.00
20-34 ageb(n:134)	13.32±9.87	11.17±7.70	14.56±2.69	14.71±2.52	14.99±3.14	15.57±2.18	15.65±1.96
> 34 age c(n:20)	11.60±9.02	10.00±7.10	13.10±2.67	14.60±2.67	15.55±2.85	15.05±2.18	15.40±1.93
P value t	0.727	0.450	0.020	0.800	2.248	0.575	0.633
Significant difference			b>a,c				
Level of education							
<High School (n:87)	12.55±9.53	11.34±7.92	14.51±2.68	14.77±2.43	15.25±3.20	15.09±2.26	15.31±2.00
≥High School (n:75)	13.58±9.81	10.86±7.20	14.04±2.76	14.62±2.64	14.68±2.96	15.94±2.01	15.92±1.85
P value t t	0.498	0.690	0.268	0.720	0.242	0.013	0.047
Type of family							
Nuclear (n:97)	12.37±9.43	10.35±6.64	14.18±2.93	14.94±2.51	15.27±2.93	15.79±1.86	15.88±1.58
Expanded (n:65)	14.01±9.96	12.27±8.72	14.46±2.39	14.33±2.52	14.55±3.30	15.03±2.54	15.15±2.35
P value t t	0.289	0.113	0.530	0.133	0.145	0.029	0.019
Employment status							
Employed (n:28)	13.50±9.01	9.96±6.29	13.17±2.69	14.50±2.15	14.89±2.39	16.64±1.78	16.57±1.54
Unemployed (n:134)	12.93±9.81	11.36±7.82	14.52±2.68	14.74±2.60	15.00±3.23	15.24±2.19	15.38±1.97
P value t t	0.700	0.572	0.019	0.495	0.554	0.003	0.003
Economic status (self reported)							
Income less than expenditurea (n:44)	11.54±9.54	10.63±7.50	14.95±2.44	14.90±2.98	14.43±2.98	14.50±2.25	14.90±2.02
Income equal expenditureb (n:99)	13.22±9.70	11.48±7.67	14.11±2.83	15.26±3.22	15.26±3.22	15.71±2.04	15.72±1.87
Income more than expenditure c(n:19)	15.47±9.56	10.36±7.55	13.73±2.64	14.48±2.60	14.84±2.60	16.57±2.00	16.47±1.80
P value t	0.210	0.618	0.153	0.887	0194	0.001	0.010
Significant difference						c>b,a	c>b,a
Kronik Hastalık Durumu							
Yes (n:16)	14.56±8.27	16.12±8.98	14.41±2.73	14.76±2.51	14.98±3.02	15.58±2.04	15.66±1.83
No (n:146)	12.86±9.80	10.57±7.23	13.18±2.42	14.12±2.62	15.00±3.86	14.56±3.24	14.93±1.95
P value t t t	0.282	0.010	0.073	0.208	0.885	0.322	0.543

t Kruskal Wallis Analysis of Variance tt t Test ttt Mann Whitney U Test CES-D: Center for Epidemiologic Studies' Depression Scale, BAI: Beck Anxiety Inventory

Number of pregnancies, number of living children and pregnancy checks and depression risk indicated no significant differences (p<0.05; Table 2). According to the results of the correlation analysis, the mothers who

experienced pregnancy for the first time, had a baby for the first time and who did not undergo regular pregnancy checks had significantly higher average depression scores compared to the other mothers (p=0.019; p=0.004; p=0.046, respectively).

Analysis carried out on the factors affecting the postpartum anxiety based on socio demographic and obstetrical characteristics showed significant differences between the level of anxiety and the presence of the chronic disease among the other socio demographic characteristics of mothers. The average score of anxiety in mothers who had a chronic disease was found to be significantly higher compared to those without any chronic disease (p=0.010; table 1). No significant statistical difference was found between the obstetrical characteristics and the level of anxiety (p>0.05; see Table 2).

Quality of Life

The average score of mothers for the perceived quality of life was 3.82±0.90, average score for perceived health was 3.75±0.97, average score for WHOQOL-BREF physical health was 14.29±2.72, average score for psychological health was 14.70±2.52, average score for social relationships was 14.98±3.10, average score for environment was 15.48±2.18, and average score for national environment was 15.59±1.95 (see Figure 1).

Table 2. Comparison of the average scores of depression, anxiety and quality of life based on obstetrical characteristics of mothers

Characteristics	CES-D	BAI	Quality of life Scale (WHOQOL-BREF)				
			Physical	Mental	Social	Environmental	National environmental
$\bar{x}\pm S$		$\bar{x}\pm S$	$\bar{x}\pm S$	$\bar{x}\pm S$	$\bar{x}\pm S$	$\bar{x}\pm S$	$\bar{x}\pm S$
Number of pregnancy							
1 [a] (n:47)	16.04±12.48	13.14±8.11	13.70±2.74	14.25±3.11	14.72±3.18	15.89±2.27	15.76±2.20
2 [b] (n:54)	12.92±7.18	9.74±6.43	14.53±2.40	14.81±2.17	14.70±2.81	15.38±1.95	15.55±1.70
≥3 [c] (n:61)	10.80±8.53	10.78±7.87	14.54±2.94	14.95±2.31	15.44±3.26	15.26±2.30	15.49±1.98
P value [t]	*0.019*	*0.071*	*0.209*	*0.341*	*0.351*	*0.683*	*0.761*
Significant difference	*a>b,c*						
Liveborn parity							
No [a] (n:58)	15.15±11.72	12.62±8.34	13.87±2.73	14.67±2.98	14.82±3.00	16.17±2.20	16.03±2.13
1 [b] (n:67)	13.65±8.45	10.52±7.05	14.38±2.73	14.52±2.21	14.86±2.97	15.05±1.99	15.28±1.69
≥2 [c] (n:37)	8.56±6.27	9.86±7.03	14.78±2.68	15.08±2.28	15.45±3.48	15.18±2.28	15.45±2.02
P value [t]	*0.004*	*0.157*	*0.272*	*0.558*	*0.576*	*0.070*	*0.090*
Significant difference	*a>b,c*						
Planned pregnancy							
Yes (n:94)	13.12±9.57	10.86±6.66	14.24±2.75	14.76±2.49	14.87±3.05	15.63±2.14	15.65±1.98
No (n:68)	12.89±9.60	11.48±8.73	14.36±2.71	14.61±2.58	15.14±3.17	15.27±2.24	15.50±1.92
P value [tt]	*0.881*	*0.607*	*0.778*	*0.714*	*0.579*	*0.304*	*0.610*
Risk Pregnancy Status							
Yes (n:36)	13.50±9.95	13.25±7.70	13.86±2.91	14.50±2.90	14.80±3.63	15.86±2.53	15.86±2.16
No (n:126)	12.89±9.60	10.51±7.46	14.42±2.66	14.76±2.42	15.09±2.96	15.38±2.07	15.51±1.89
P value [ttt]	*0.742*	*0.056*	*0.279*	*0.585*	*0.691*	*0.247*	*0.352*
Follow pregnancy status							
Regular (n:152)	*12.75*±9.75	*11.20*±7.78	*14.26*±2.76	*14.78*±2.54	*15.01*±3.07	*15.58*±2.13	*15.67*±1.90
Irregular (n:10)	17.20±7.08	9.90±3.03	14.80±2.14	13.50±2.06	14.50±3.62	14.00±2.49	14.30±2.31
P value [ttt]	*0.046*	*0.837*	*0.649*	*0.056*	*0.600*	*0.048*	*0.076*
The sex of the baby want							
Wanted (n:101)	*13.07*±9.36	*11.53*±7.71	*14.51*±2.68	*15.00*±2.37	*15.18*±2.87	*15.67*±2.20	*15.76*±1.92
Unwanted (n:61)	12.95±10.18	10.44±7.36	13.93±2.78	14.21±2.70	14.65±3.44	15.18±2.13	15.31±1.98
P value	*0.935*	*0.376*	*0.190*	*0.055*	*0.291*	*0.165*	*0.155*
Type of delivery							
Normal vaginal delivery (n:104)	*12.02*±9.48	*10.90*±7.66	*14.61*±2.73	*14.95*±2.52	*15.02*±3.27	*15.16*±2.21	*15.29*±2.01
Cesarean section (n:58)	14.82±9.77	11.51±7.47	13.72±2.63	14.25±2.50	14.91±2.79	16.06±2.03	16.12±1.73
P value [tt]	*0.077*	*0.623*	*0.046*	*0.094*	*0.822*	*0.011*	*0.010*
Problems in the baby at birth							
No (n:135)	*12.56*±9.86	*11.27*±7.79	*14.26*±2.75	*14.83*±2.55	*15.09*±2.93	*15.45*±2.20	*15.58*±1.96
Yes (n:27)	15.37±8.28	10.37±6.48	14.44±2.63	14.03±2.31	14.44±3.84	15.62±2.13	15.62±1.94
P value [tt]	*0.050*	*0.939*	*0.788*	*0.099*	*0.426*	*0.895*	*0.886*

[t] Kruskal Wallis Analysis of Variance [tt] t Test [ttt] Mann Whitney U Test

CES-D: Center for Epidemiologic Studies' Depression Scale, BAI: Beck Anxiety Inventory

Analysis of the factors affecting the postpartum quality of life of mothers based on socio demographic and obstetrical characteristics showed that there was a significant difference

between mothers' age, working status (see Table 1) and delivery method (see Table 2) and the physical health sub-scale of the quality of life. The average physical health sub-scale scores of the mothers who did not work and who had NVD in the 20-34 age group were found significantly higher compared to the other mothers (p=0.020; p=0.019; p=0.046, respectively).

A significant difference was found between both the environment and national environment sub-scale of the quality of life and the education level of the family, type of family, professional career and economic perception. The average environment and national environment sub-scale scores of mothers living in a nuclear family, working and having higher income than expenses were found significantly higher compared to the other mothers (education level p=0.013, p=0.047; family type p=0.029, p=0.019; working status p=0.003, p=0.003; perception of economic status p=0.001, p=0.010, respectively; see Table 1).

A significant difference was found between the pregnancy checks, delivery method and environment sub-scale and delivery method and national environment sub-scale. It was found that average environment sub-scale scores of mothers who underwent regular pregnancy checks and both environment and national environment sub-scales of mothers who had caesarean section delivery were significantly higher than the other mothers (p=0.048; p=0.011; p=0.010, respectively; see Table 2).

Analysis of the correlation between the average CES-D and BAI score and WHOQOL-BREF sub-scale showed that there was a negative correlation between the average score of CES-D and BAI score and average WHOQOL-BREF physical health, psychological health, social relationships and national environment sub-scale scores (table 3). As the CES-D and BAI score increased, scores of physical health (r=-0.302, p==.000; r=-0.310, p=0.000, respectively), psychological health (r=-0.606, p==.000; r=-0.426, p=0.000, respectively), social relations (r=-0.209, p==0.008; r=-0.227, p=0.004, respectively), national environment (r=-0.210, p=0.007; r=-0.170, p==0.031, respectively) sub-scales of WHOQOL-BREF decreased (table 3). Analysis carried out for the quality of life sub-scale scores of the mothers with postpartum depression and anxiety showed reduced scores in all fields other than WHOQOL-BREF environment sub-scale. In addition, analysis of the correlation between the level of depression and anxiety based on quality of life sub-scales showed that the level of postpartum depression and anxiety increased as the scores increased for the sub-scales other than WHOQOL-BREF environment sub-scale (table 3).

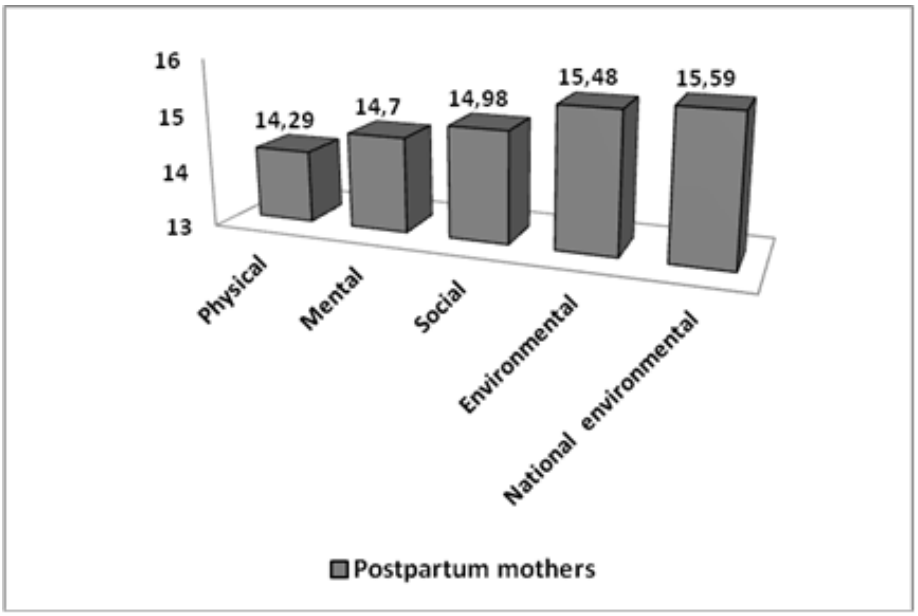

Fig. 1. Average WHOQOL-BREF sub-dimension scores of mothers.

Table 3. Correlation between postpartum depression and anxiety level, and quality of life

	Quality of life Scale (WHOQOL-BREF)									
	Physical		**Mental**		**Social**		**Environmental**		**National environmental**	
	r	p	r	p	r	p	r	p	r	p
CES-D	-0,302	*0,000*	-0,606	*0,000*	-0,209	*0,008*	-0,142	*0,072*	-0,210	*0,007*
BAI	-0,310	*0,000*	-0,426	*0,000*	0,227	*0,004*	0,122	*0,123*	-0,170	*0,031*

CES-D: Center for Epidemiologic Studies' Depression Scale, BAI: Beck Anxiety Inventory

Discussion

The present study revealed that particularly the physical health, psychological health and social relationships sub-scales of the quality of life had lower levels compared to the other two dimensions among the mothers in the early postpartum period. On the other hand, average scores indicated a quality of life better than the moderate level. One-third of mothers posed the risk of depression. Number of pregnancies, number of children, and pregnancy checks affected the postpartum depression level of mothers. Anxiety level of mothers was found much lower than the average. In addition, it was observed that the quality of life reduced as the depression risks and anxiety levels of mothers increased in the early postpartum period.

The postpartum period is a challenging period because the mother experiences physiological changes; there is a transition to parenthood; new roles and responsibilities are experienced. Anxiety and depression experienced in this period are important as they affect not only the mother but also the baby and the entire family. The frequency of experiencing postpartum depression varies from one society or culture to another. International studies on the frequency of postpartum depression [12-16] reveal a postpartum depression frequency of 9 to 39.8% and it ranges from 12.5 to 40.9% in the studies conducted in Turkey [2, 17-21]. Postpartum depression frequency was found as 33.3% in our study, which is consistent with the results of the aforementioned studies. However, as the depression scores obtained in the present study are based on the self-assessment of individuals, determining only the frequency of such data would not suffice to determine the depression frequency, yet it would not be wrong to say that the depression rate is high. Differences in the postpartum depression frequencies reported in various studies result from the factors such as design and evaluation of different postpartum periods, differences in the characteristics of the target group, differences in the socio-economic development level and different reference points taken in the same scale.

The present study showed that the postpartum depression level of mothers is not affected by the education level, family type, working status, perception on economic status and the presence of a chronic disease. There are studies indicating that age [19, 20, 22], educational status [18, 19, 22], working status [20], socio-economic level [22], and the presence of a chronic disease [22] do not affect the level of postpartum depression and they are proven to be parallel with the results obtained in the present study. Contrary to the aforementioned results, Inandi [17] suggested that young age and Durukan et al. [20] suggested that low education level serves as a risk factor for the postpartum depression. This difference may be due to the differences in the socioeconomic level of the groups in which the study was conducted and the use of different scales.

The present study found that the number of pregnancies and children as well as the regular pregnancy checks affected the postpartum depression levels of mothers. As shown in the study of Durukan et al. [20], postpartum depression level of primiparous mothers is higher than mothers with two pregnancies and mothers with three and more pregnancies. Although a positive and satisfying feeling is experienced with the arrival of a new baby, some mothers experience certain emotional problems. Depression has been considered to be the most common and challenging problem [18]. Increased number of births and the number of living children, biological and spiritual changes experienced by mothers, increased responsibility, lack of time allocated to self, affect the frequency of depression. It has been seen that the concerns of first-time mothers about the well-being of the baby increase the level of postpartum depression. Mothers who do not undergo regular pregnancy checks experience high levels of postpartum depression because of their increased concerns and fears about the well-being of their baby; they also feel guilty for not having regular checks. Such negative feelings may create symptoms of depression in mothers.

The present study indicated that the type of delivery, problems experienced with the baby during the delivery and postpartum period did not affect the postpartum depression and anxiety level. Consistent with the results of the present study, Efe et al. [19] found that the method of delivery and health problems of the baby do not affect the level of postpartum depression. Goecke et al. [15] reported no significant differences between the postpartum depression and postoperative complications and duration of anesthesia and delivery.

Anxiety disorders have increased frequency in the postpartum period compared to the depression (37.1% in the first one-month period). However, not much importance is given to them and their prevalence increases when they are accompanied by depression. Low education levels of mothers, emotional disorder histories, perception of exaggerated perinatal stress (pain, loss of control), and extremely anxious personalities are some of the main risk factors [23]. It was also found that postpartum anxiety level was not affected by age, education and working status, economic level perception and type of family. This issue revealed the higher significance in the anxiety level of those with chronic disease.

Scores to be obtained from the Perceived Quality of Life Scale range from 0 to 5. Thus, it was found that the mothers had a good level of perception about the quality of life because average scores were 3.82±0.90 and 3.75±0.97 for the quality of life and health quality perceptions of mothers respectively. In addition, the above-average tendency of the quality of life sub-scales analyzed in the present study indicated that mothers had quality of life perceptions above the moderate level. Some studies evaluating the postpartum quality of life found the postpartum quality of life among mothers were at medium [24, 25] and good [26, 27] levels.

During the process of adaptation to the parenthood role and baby care in the postpartum period, feelings such as stress, anxiety, loss of internal control, insufficient performance experienced by the mother have negative

effects on her functional status and the quality of life [28]. Studies conducted about postpartum depression and the quality of life showed that the quality of life scores of the mothers with postpartum depression were lower than those without postpartum depression [29-31]. This study found that the quality of life decreased as the level of depression and anxiety increased. Consistent with the results obtained by Durukan et al. [20], it was found that the postpartum depression had significant effects on the quality of life of mothers. The presence of postpartum depression reduced the expected quality of life of the mother and prevented her from fulfilling the motherhood roles and responsibilities in the daily life activities [20] and caused impairment of the health condition [32].

Women's need for help about self-care and baby care leads to concerns about childcare and changes that may be brought by the new-born baby to the marriage and family life [33]. Sahin et al. [34] suggested that women experiencing fear and concerns in the postpartum period experience increased levels of anxiety, and as a mother have reduced levels of self-confidence, which in turn creates negative effects on the quality of life. Likewise, increased levels of anxiety among the mothers in the present study decreased the quality of life. Studies with results similar to those obtained in our study showed that scores of depression and quality of life are highly correlated and postpartum depression has negative effects on the quality of life [16, 35-38].

Akin et al. [39] suggest that quality of life increased among the women who were monitored in the post-partum period compared to those who were not monitored. Therefore, the findings of our study are important in terms of showing the potential effects of the postpartum check-ups of the mothers.

Conclusion

Quality of life is reduced as the depression and anxiety levels increase among the mothers in the postpartum period. Early diagnosis and prevention of the postpartum depression are of great importance for the health of both the mother and baby. Establishment of the factors affecting the mental health of a mother by a healthcare professional and prevention of the impacts of such factors on mother would allow her to have positive, satisfying experiences strengthening the family ties and increasing the quality of life during this period. Many problems can be detected and prevented through monitoring the spiritual condition of women in the postpartum period by healthcare professionals. Providing training to the mother in parallel with her needs would improve the self-confidence and contribute towards the improvement of the problem solving skills and the quality of life. Identification of the factors affecting the quality of life in the postpartum period in our country would allow provision of integral care services to women in order to ensure their adaptation to the postpartum period.

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