**Original Article**

# The Effect of Social Support on Pregnancy and Postpartum Depression

**Selma Hancioglu Aytac, MSc**
**Midwife, Sofular Family Health Center, Istanbul, Turkey**

**Saadet Yazici, PhD**
**Professor, University of Health Sciences, Faculty of Health Sciences, Department of Midwifery, Selimiye Mahallesi, Istanbul, Turkey**

**Correspondence:** Saadet Yazici, PhD, Professor, University of Health Sciences,  Faculty of Health Sciences, Department of Midwifery Selimiye Mahallesi, Tıbbiye Cd, 34668 Uskudar, Istanbul, Turkey E-mail: saadetyazc@yahoo.com       saadet.yazici@sbu.edu.tr

**Abstract**

**Introduction:** Recent researches show us the given social support to the mother during pregnancy, birth and in postpartum peroid effects positively the adaptation to the role of motherhood, increases sensitivity to the baby and helps to relations with the relatives.

**Methods:** This study was conducted between 29.06.2015 and 01.06.2016 to determine the effect of social support on pregnancy and postpartum depression. 127 out of 190 pregnant women who registered to the Sofular Family Health Center were included in this study. Questionnaires related to the pregnancy and postpartum period, Edinburgh Postnatal Depression Scale (EPDS) and Multidimensional Scale of Perceived Social Support (MSPSS) were used to collect data. The data were evaluated by SPSS 21.0 statistical software.

**Results:** Results were evaluated at 95 % confidence interval and $p<0.05$ significance level. It was determined that the mean score of Edinburg Postnatal Depression Scale was  $8,07\pm6,42$, its rate was 23.6% and the mean score of Multidimensional Scale of Perceived Social Support was $60,276 \pm 15,721$. A significant correlation between the mean score of the social support perceived from the family and the women's age and education levels ($p<0.05$).In the correlation analysis between perceived social support and depression total scores, a significant negative correlation was found ($r=-0,260$; $p=0,003<0,05$), and it was observed that as the total perceived social support score increased, the depression score decreased.

**Discussion:** At the end of this study, it was observed that when the perception of social support is increased the perception of depression is decreased.  Early diagnosis of psychological problems that may occur during pregnancy and postpartum period by midwives, will prevent the depression of pregnancy and postpartum period and will reduce the perception of depression. This will lead to the development of a healthy mother, healthy family and healthy society.

**Keywords:** Pregnancy, birth, postpartum depression, social support.

## Introduction

Pregnancy is an important milestone in birth and postpartum period of women's life and is also defined as a period of developmental crisis. This period is a complex process where biological, physiological, social and spiritual changes are experienced. The social support to be given to the woman during the pregnancy, birth, and postpartum period positively affects the adaptation process to the motherhood role, increases her sensitivity to her baby and facilitates the relationship with her relatives (Tezel & Gözum, 2005, Tasdemir, Kaplan and Bahar 2006, Herguner et al. 2014, Durukan et al. 2011, Mermer et al. 2010).

Social support can be received from people in the vicinity, primarily the spouse. It is known that women, especially with the support they receive from their social environment, have a more positive pregnancy and postpartum period, adapt the role of motherhood more quickly and experience postpartum period more smoothly.

Women endeavor to adapt to the developments in the postpartum period, to perform their own care and to meet the needs of the newborn. In this period, where women's stress situation increases,

adequate support affects their physical and mental health positively. In the studies conducted, the lack of social support, mismatch between spouses and stressful living conditions are among the important causes of psychiatric disorders seen in postpartum period. It is important for the health of the woman and the newborn, and for the maintenance of healthy relations within the family, to receive social support during pregnancy and postpartum period (Mermer et al. 2010, Vırıt et al. 2008, Eren 2000).

Biological predisposition or psychosocial sensitivity of the women makes it easier to reveal depression in conditions like pregnancy, birth and postpartum period. The presence of postpartum depression is characterized by rapid change in emotions, fatigue, sleep disturbance, irritability, difficulty in concentration, hypersensitivity to criticism, lingering of feelings of loss and grief with increasing severity (Vırıt et al. 2008, Eren 2000, Taskın 2012).

In studies conducted in Turkey, the frequency of postpartum depression in women has been reported to range between 21.2% and 28% (Inandı et al.2002, Nur et al. 2004, Vural & Akkuzu 1999). In studies conducted in some countries, the frequency of postpartum depression was found; 22.6% in Israel, 17% in Japan, 17.8% in the United Arab Emirates, 14% in Iceland, 12.7% in Sweden and 12% in the UK (Glasser et al. 1998, Cooper & Murray 1998, Yoshida et al. 2001, Harris et al. 1994, Thome 2000, Josefsson et al. 2001).

Environmental support, especially spousal support, is very important in postpartum depression. Family members need to adapt to the process of pregnancy preparation and adaptation during pregnancy. Because, in the postpartum period, baby care has the difficulty of creating a safe environment for the baby, communicating with the baby, learning new roles, developing family sensitivity and dealing with problems related to the baby (Tasdemir, Kaplan and Bahar 2006, Marakoglu, Ozdemir and Civi 2009). The most important way for women to get rid of anxiety at the end of postpartum is to make her feel safe. Knowing that she is not alone and that she will be next to her husband and social environment at every shortage makes her very comfortable (Kesgin & Topuzoglu 2006).

Midwives are the health personnel who are most close to the women. They especially have the opportunity to get women know closely in the follow-up of women in 15-49 years of age, follow-up of pregnancy and postpartum period. In this process, they can determine the early diagnosis of postpartum period and the content and quality of the support given to women in this regard. Midwives are important occupational groups that may contribute to prevention, early detection and treatment of postpartum depression (Vural & Akkuzu 1999, Erdem  & Bucaktepe 2012). This study was conducted with midwives because it can contribute to them to use these roles effectively, to help women in receiving social support during pregnancy and postpartum period and to reach positive results with their contributions.

## Materials and Methods

The study was conducted as descriptive and cross-sectional in order to determine the effect of social support on pregnancy and postpartum depression.

**Location and Duration of the Study:** The study was conducted between 29.06.2015 and 01.06.2016 at Istanbul, Fatih, Sofular Family Health Center affiliated to the Republic of Turkey Ministry of Health.

**Population and Sample of the Study:** The population of the study consisted of 190 women between 15 and 49 years of age who were enrolled in the Sofular Family Health Center affiliated to the Ministry of Health. In order to determine the sample, calculation was made by using the sample size formula. The minimum sample size was calculated as 127 for the estimation of statistics with 95% confidence interval and $\pm 5\%$ sampling error.

**Inclusion Criteria:** Women who were willing to participate in the study, between 15 and 49 years of age, between 32nd and 36th gestational week and who were at the end of the 2nd and 6th weeks of the postpartum period.

**Exclusion Criteria:** Women who received psychiatric treatment during the last three months of pregnancy, had trouble communicating and did not agree to participate in the study were excluded from the study.

**Data Collection Instruments:** Data were collected by face-to-face interview method by researchers in home visits and interview room which was established at family health center. The data collection took about 18 minutes for each woman.

**A total of four forms were used to collect data:**
1. Questionnaire on Pregnancy Period: This form prepared by the researchers included 43 questions. The first 21 questions were related to the descriptive characteristics of women, other questions were related to psychological status, exposure of violation and social support.
2. Questionnaire on Postpartum Period: A total of 21 questions were included in this questionnaire. Questions about delivery type and week, problems with birth, concerns about birth and infant, problems with breastfeeding, support status for infant care, features of infant and feeding style were included.
3. Edinburgh Postnatal Depression Scale: The Edinburgh Postnatal Depression Scale (EPDS) was developed in 1987 by Cox et.al.21 It is a ten-item scale. In the evaluation of the scale, all questions are scored between 0 and 3. The highest score can be obtained from the scale is 30. Questions 1, 2 and 4 are scored as 0-1-2-3. Questions 3, 5, 6, 7, 8, 9 and 10 are scored as 3-2-1-0. The cut-off point of the scale was calculated as 12. The results at 12 and above as a cut-off point indicate possible major and minor depression. The scale was adapted to Turkish language in 1996 by Engindeniz et.al, and its validity and reliability study was also conducted by this team. 22 This scale was applied to women who accepted to participate in the study, complied with the research criteria and were between 2nd and 6th weeks of postpartum period.
4. A revised form of the Multidimensional Scale of Perceived Social Support: The Multidimensional Scale of Perceived Social Support (MSPSS) is a short scale that evaluates the adequacy of social support subjectively from three different sources. Sub-scale units of the scale proposed by Zimet et al. (1988), includes family, friend and support from a special person. Factor analysis based these proposed units on different samples 23-26 The internal consistency of the scale and its sub-scales, 23-26 and test-retest correlations 25 are sufficiently satisfactory. This scale was applied to women who were in the second trimester of pregnancy.

**Evaluation of the Data**

Statistical Package for Social Sciences (SPSS) 21.0 was used for the analysis of the data. In statistical analysis, Mann Whitney U test, Kruskal Wallis test and t-test, Pearson Correlation analysis, one-way analysis of variance (ANOVA) and post-hoc were used.

Results were evaluated at 95% confidence interval and $p < 0.05$ significance level.

**Ethical Aspect of the Study:** Institutional permissions and permission of ethics committee were obtained before the beginning of data collection. Women were also informed about the study. Written informed consent was obtained from those who were willing to participate in the study.

**Results**

It was determined that the average age of the women was 28.5±5.25, the majority of them were between the ages of 25-29 (37.8%), had university and higher education (32.3%), the spousal education was university and higher (32.3%), not employed (76.4%) and housewife (76.4). In addition, it was determined that the majority of the spouses were working in the private sector (71.3%), the family type was nuclear family (74.0%), the number of people living at home was two (36.2%), the income was equivalent to expenses (61.4), the women had social security (85%) and they were living in their own house (48.8%) Table 1.

When the mean MSPSS sub-group scores in Table 2 were evaluated, it was found that the social support score obtained from the family was higher than the other variables (23.331±4.837), and the EPDS mean score was 8.07 ± 6.4, (%23.6).

In Table 3, it was statistically significant when the social support sub-groups were compared in terms of educational status and working status (p <0.05). According to the family type variable, both EPDS and MSPSS mean scores were statistically significant (p <0.05).

In addition, when the other data were evaluated at the end of the research, it was found that in terms of social support, the age of marriage, age of first sexual intercourse, systemic disease status, and the number of pregnancies were statistically significant (p> 0.05).

In Table 4, the status of requesting pregnancy, the average of depression and social support according to the variables of pregnancy, the average of depression according to the variables of pregnancy education / education classes during pregnancy, presence of psychological problems in the pre-pregnancy period and the average of depression and social support were found to be statistically significant (p <0.05).

| Table 1. Distribution of Socio-Demographic Characteristics (N=127) | | |
|---|---|---|
| **Socio-Demographic Characteristics** | **Number** | **Percent** |
| **Age (Average 28,5±5,25)** | | |
| **15-19 Age difference** | 4 | 3.1 |
| **20-24 Age difference** | 24 | 18.9 |
| **25-29 Age difference** | 48 | 37.8 |
| **30-34 Age difference** | 32 | 25.2 |
| **35 Age difference** | 19 | 15.0 |
| **Education Status** | | |
| **Not literate** | 3 | 2.4 |
| **Elementary school** | 29 | 22.8 |
| **Middle School** | 22 | 17.3 |
| **High school** | 32 | 25.2 |
| **University and above** | 41 | 32.3 |
| **Education of spouse** | | |
| **Literate / elementary school** | 26 | 20.5 |
| **Middle School** | 19 | 15.0 |
| **High school** | 41 | 32.3 |
| **University and above** | 41 | 32.3 |
| **Working Status** | | |
| **Yes** | 30 | 23.6 |
| **No** | 97 | 76.4 |
| **Job** | | |
| **Housewife** | 97 | 76.4 |
| **Private sector** | 14 | 11.0 |
| **Public employees** | 16 | 12.6 |
| **Working State of Spouse** | | |
| **Yes** | 122 | 96.1 |
| **No** | 5 | 3.9 |
| **His wife's profession (n=122)** | | |
| **Public employees** | 35 | 28.7 |
| **Private sector** | 87 | 71.3 |
| **Family Type** | | |
| **Extended family** | 33 | 26.0 |
| **Nuclear family** | 94 | 74.0 |
| **Number of people living at home** | | |
| **Two** | 46 | 36.2 |
| **Three** | 29 | 22.8 |
| **Four** | 22 | 17.3 |
| **Five and above** | 30 | 23.6 |
| **Social Security Asset** | | |
| **Yes** | 108 | 85.0 |
| **No** | 19 | 15.0 |
| **Economical situation** | | |
| **More than revenue** | 28 | 22.0 |
| **Equivalent to revenue removal** | 78 | 61.4 |
| **Less than income removal** | 21 | 16.5 |
| **Living House** | | |
| **Own house** | 62 | 48.8 |
| **Rent** | 65 | 51.2 |

**Table 2. Multidimensional Scale of Perceived Social Support (MSPSS) and Edinburgh Postnatal Depression Scale (EPDS) score Average (N=127)**

| Scales used | | | |
|---|---|---|---|
| **MSPSS Subgroups** | **Lower and Upper Values** | **MSPSS Mean ± SD** | **Marked Sub and Top Values** |
| **From Family** | 4-28 | 23.331±4.837 | 8-28 |
| **From Friend** | 4-28 | 18.693±7.035 | 4-28 |
| **From a special person** | 4-28 | 18.252±7.001 | 4-28 |
| **Total MSPSS Score Average** | 12-84 | 60.276±15.721 | 18-84 |
| **EDSSS Point Average** | **Lower and Upper Values** | **EDSSS Points Average ± SS** | **Marked Sub and Top Values** |
| **Depression** | 0-30 | 8.07±6.42 | 0-25 |

**Table 3. Socio-demographic Characteristics of EDSS and MSPSS Averages (N=127)**

| Sociodemographic Characteristics | EDSSS Point Average Mean ± SD | Sub-Groups and Score Average | | | MSPSS Total Points Mean ± SD |
|---|---|---|---|---|---|
| | | **From family** Mean ± SD | **From  Friend** Mean ± SD | **From a special person** Mean ± SD | |
| **Age Groups** | | | | | |
| **15-19 age difference (n=4)** | 9.250±6.292 | 20.250±2.630 | 18.000±5.831 | 16.500±9.256 | 54.750±16.540 |
| **20-24 age difference (n=24)** | 6.170±5.903 | 23.88±4.684 | 18.380±7.756 | 18.460±7.581 | 60.710±18.110 |
| **25-29 age difference (n=48)** | 8.750±6.466 | 24.620±3.829 | 18.690±7.105 | 18.600±6.921 | 61.920±13.953 |
| **30-34 age difference (n=32)** | 7.940±5.814 | 23.410±4.865 | 20.220±5.661 | 18.500±6.787 | 62.120±13.826 |
| **35 age and above (n=19)** | 7.630±6.405 | 19.890±6.008 | 16.680±8.260 | 17.050±6.948 | 53.630±19.001 |
| **Statistical Evaluation** $F^b$ / KW $^a$ | 0.876 | 14.45 | 3.171 | 1.249 | 4.184 |
| p | 0.481 | **0.013** | 0.674 | 0.940 | 0.523 |
| **Education Status** | | | | | |
| **Elementary-literate (n=3)** | 9.00±9.849 | 24.33±1.528 | 15.33±9.609 | 16.33±7.024 | 56.0±17.52 |
| **Not literate (n=29)** | 8.79±6.763 | 20.21±5.519 | 15.79±7.153 | 16.41±6.428 | 52.41±15.32 |
| **Middle School (n=22)** | 9.09±4.71 | 24.00±4.525 | 18.500±6.830 | 17.91±7.027 | 21.71±5.993 |
| **High school (n=32)** | 7.530±5.708 | 23.56±4.103 | 17.91±7.027 | 17.81±7.541 | 19.05±7.476 |
| **University and above (n=41)** | 6.850±6.575 | 24.93±4.292 | 21.71±5.993 | 19.05±7.476 | 65.68±14.89 |
| **Statistical Evaluation** KW $^a$ | 4.062 | 19.287 | 14.340 | 5.257 | 13.059 |
| P | 0.398 | **0.001** | **0.006** | 0.262 | **0.011** |
| **Education Status of the spouse** | | | | | |
| **Primary school literate (n=26)** | 8.96±6.036 | 20.81±6.363 | 15.50±7.36 | 15.85±5.80 | 52.15±14.99 |
| **Middle School (n=19)** | 37±6.43 | 22.84±4.375 | 17.11±7.17 | 19.63±6.76 | 59.58±16.54 |
| **High school (n=41)** | 8.680±5.654 | 23.34±3.90 | 18.49±7.11 | 17.02±7.42 | 58.85±14.86 |
| **University and above (n=41)** | 6.71±6.58 | 25.15±4.10 | 21.66±5.60 | 20.37±6.84 | 67.17±14.14 |
| **Statistical Evaluation** $F^b$ | 0.855 | 4.735 | 4.980 | 3.081 | 5.624 |
| P | 0.467 | **0.004** | **0.003** | **0.030** | **0.001** |
| **Working Status** | | | | | |
| **working (n=30)** | 6.400±5.289 | 24.500±4.747 | 21.200±6.723 | 19.070±7.768 | 64.770±17.002 |
| **Not working (n=97)** | 8.370±6.363 | 22.970±4.831 | 17.920±6.980 | 18.000±6.770 | 58.890±15.126 |
| **Statistical Evaluation** MW $^c$ | 1574 | 1 085.0 | 1 026.0 | 1 304.5 | 1 086.5 |
| P | 0.628 | **0.034** | **0.015** | 0.392 | **0.036** |
| **Aile Tipi** | | | | | |

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|---|---|---|---|---|---|---|
| **Statistical Evaluation (n=33)** | | 10.210±6.348 | 22.670±4.735 | 16.180±7.073 | 16.000±6.643 | 54.850±15.002 |
| **Nuclear family (n=94)** | | 7.100±5.921 | 23.560±4.876 | 19.570±6.842 | 19.040±6.985 | 62.180±15.598 |
| **Statistical Evaluation** | **MW <sup>c</sup> t <sup>d</sup>** | 1085.5 | -0.916 | -2.429 | -2.180 | -2.346 |
| | **P** | **0.010** | .361 | **0.017** | **0.031** | **0.021** |

[a]Kruskal Wallis test.　[b]Anova test.　[c]Mann Whitney U test.　[d]t-test.

**Table 4. Data on the Pregnancy Period Average ESSRS and MSPSS Average (N=127)**

| Data on the Pregnancy Period Average ESSRS and MSPSS Average | | EDSSS Point Average Mean ± SD | EDSSS Sub-Groups and Score Average | | | MSPSS Total Points Mean ± SD |
|---|---|---|---|---|---|---|
| | | | From family Mean ± SD | From friend Mean ± SD | From a special person Mean ± SD | |
| **Pregnancy Request** | | | | | | |
| **Yes (n=105)** | | 7.25±5.96 | 24.16±4.12 | 19.29±6.71 | 18.7±6.61 | 62.14±14.2 |
| **No (n=22)** | | 11.0±6.26 | 19.3±6.02 | 15.8±7.98 | 16.1±8.46 | 51.3±19.66 |
| **Statistical Evaluation** | **MW <sup>a</sup> / t <sup>b</sup>** | 750.5 | 4.549 | 2.103 | 1.568 | 3.017 |
| | **p** | **0.010** | **0.001** | **0.037** | 0.193 | **0.022** |
| **People Who Want Pregnancy** | | | | | | |
| **Myself (n=20)** | | 10.55±6.77 | 24.60±4.18 | 19.45±7.22 | 20.10±7.01 | 64.15±14.77 |
| **My partner (n=18)** | | 8.33±6.69 | 22.89±4.61 | 17.00±7.50 | 15.78±6.16 | 55.67±14.48 |
| **The two of us (n=67)** | | 5.97±5.10 | 24.37±3.96 | 19.85±6.29 | 19.06±6.48 | 63.28±13.63 |
| **Reluctantly (n=22)** | | 11.05±6.26 | 19.36±6.02 | 15.86±7.98 | 16.14±8.46 | 51.36±19.66 |
| **Statistical Evaluation** | **F <sup>c</sup> / KW<sup>d</sup>** | 5.804 | 16.477 | 5.426 | 6.468 | 9.707 |
| | **p** | **0.001** | **0.001** | 0.143 | 0.091 | **0.021** |
| **Pregnancy Education** | | | | | | |
| **Yes (n=9)** | | 3.89±6.17 | 25.44±2.35 | 22.00±6.22 | 20.00±5.14 | 67.44±12.13 |
| **No (n=118)** | | 8.21±6.08 | 23.17±4.94 | 18.44±7.05 | 18.12±7.12 | 59.73±15.86 |
| **Statistical Evaluation** | **MW <sup>a</sup> / t <sup>b</sup>** | 274 | 1.365 | 1.470 | 0.776 | 1.425 |
| | **p** | **0.016** | **0.025** | 0.144 | 0.439 | 0.157 |
| **Psychological problem pre-pregnancy** | | | | | | |
| **Yes (n=21)** | | 10.19±4.84 | 19.24±6.42 | 17.24±6.78 | 16.62±6.47 | 53.10±15.96 |
| **No (n=106)** | | 7.45±6.31 | 24.14±4.02 | 18.98±7.07 | 18.58±7.08 | 61.70±15.35 |
| **Statistical Evaluation** | **MW <sup>a</sup> / t <sup>b</sup>** | 778 | -4.566 | -1.038 | -1.172 | -2.331 |
| | **p** | **0.029** | **0.003** | 0.301 | 0.244 | **0.021** |

[a]Mann Whitney U test　[b]t-test　[c]Anova test　[d]Kruskal Wallis test

**Table 5. EDSS and MSBSS Averages of Data on Financial Support (N=127)**

| EDSS and MSBSS Averages of Data on Financial Support | | EDSSS Point Average Mean ± SD | EDSSS Sub-Groups and Score Average | | | |
|---|---|---|---|---|---|---|
| | | | From family Mean ± SD | From Friend Mean ± SD | From a special person Mean ± SD | Mean ± SD |
| **Financial Support** | | | | | | |
| **Parents (n=31)** | | 8.16±6.14 | 24.29±4.52 | 21.68±5.68 | 20.87±5.74 | 66.84±12.37 |
| **My wife's family (n=32)** | | 8.22±6.87 | 23.94±3.16 | 16.09±6.96 | 16.38±6.89 | 56.41±14.04 |
| **Family of Us (n=24)** | | 7.42±5.20 | 25.38±2.93 | 21.83±5.02 | 20.38±7.52 | 67.58±13.42 |
| **Statistical Evaluation** | **F <sup>a</sup> / KW <sup>b</sup>** | 0.192 | 17.705 | 17.705 | 11.737 | 18.975 |
| | **P** | 0.825 | **0.005** | **0.008** | **0.008** | **0.000** |

[a]Anova test [b]Kruskal Wallis test

**Table 6. Relationship Between Depression and Perceived Social Support**

| Social support | Depression | |
|---|---|---|
| | r | P |
| Social support from family | -0.155 | 0.083 |
| Perceived social support from private person | -0.202 | **0.023** |
| Social support perceived by a friend | -0.275 | **0.002** |
| Perceived social support total score | -0.260 | **0.003** |

When the other data related to pregnancy period of the women were evaluated at the end of the study, there was no statistically significant difference between the group averages and alcohol, smoking, previous delivery type, unwillingness to presence a relative during labor, desire to relative during postpartum, the presence and reason of anxiety during labor and gestational week (p>0.05). In the case of violence, it was determined that the perceived social support from the family was significant (p=0.001), the perception of depression was much higher in women who exposed to violence (10.400±9.072) than in women who were not exposed to violence (7.800±6.048), in women who had domestic conflict the depression was highly significant (p=0.007), depression was significant in terms of loss of a relative (p=0.003), the presence of supportive relative was significant in terms of perceived social support from family (p=0.031), the presence of anxiety for both the womn and baby was significant in terms of both depression (p=0.049) and social support (p=0.013).

At the end of the study, when the other data about the postpartum period of women were evaluated, it was determined that the difference between anxiety about the infant care after delivery, problems during delivery, postpartum breastfeeding time, postpartum breastfeeding problems, the presence of a supportive person in the care of woman and the baby, popstpartum spousal support, to feel the customs and traditions from relatives as a matter of pressure and its reason, the effects of both presence and absence of environmental support and the group averages was not statistically significant (p>0.05). The presence of health problem of the baby was significant in terms of social support (p=0.037), the presence of a supportive person was significant in terms of perceived social support from family (p=0.025), spousal support (p=0.025) and the presence of a supportive person for resting (p=0.030) were significant in

terms of depression, the presence of anxiety when the absence of the women about the care of baby was significant in terms of both depression (p=0.006) and social support (p=0.009), presence of a financial supportive person was highly signician in terms of social support (p=0.002).

In Table 5, it was determined that the variable of the presence of financial supportive person from the perceived social support mean scores was statistically significant (p<0.05).

In Table 6, as a result of the correlation analysis to determine the relationship between percevide social support and depression, it was determined that there was no statistically significant correlation between the scores (r=-0,155; p=0,083>0,05). However, there was a negative correlation between the scores of social support from friends, from a special person and total social support score. Accordingly, depression score decreases as the perceived social support score increases Table 6.

**Discussion**

It is known that the social support will facilitate the adaptation of the women to the pregnancy, birth, postpartum period and their coping with the problems in these periods (Tezel & Gözum 2005, Tasdemir, Kaplan and Bahar 2006, Herguner et al. 2014, Durukan et al. 2011).

As a result of the study findings, majority of the pregnant women were in the 25-29 age group (37.8%), had university graduate (41.0%), were housewives (76.4%), with spouse working in the private sector (71.3%) and had nuclear family (74.0%) Table 1. The socio-demographic characteristics of the women are similar with the results of Turkey Demographic and Health Survey (2013). This situation can be explained by the fact that socio-demographic structure of the sample selection region is similar with Turkey in general. In Table 2, it is seen that the score of the social support from the family is higher than the other variables (23.331 ± 4.837) and the EPDS

score average is $8.07 \pm 6.4$ (23,6%). Being able to get rid of anxiety during the postpartum period shows that the woman is not alone, and that she want and can get this support from her spouse and the social environment in every distress (Kesgin & Topuzoglu 2006).

Although there was no significant difference between depression averages of women, it was found that women between the ages of 15 and 19 perceived depression higher Table 3. The fact that this group is an adolescent, indicates that it affects the result. Socio-demographic findings of the pregnants show similarities with the results from Turkey Demographic and Health Survey (2013). In Turkey, Inandı et al. (2005) also reported that adolescent age was a risk factor for postpartum depression. Figueiredo et al. (2007) found that adolescents showed significantly more depressive symptoms both during pregnancy and postpartum period in a randomized study in the Netherlands. In the same study, it was emphasized that pregnant women who have depressive symptoms may need more social support. In our study, women with a 25-29 years of age range perceive their social support higher than the 15-19 age group and therefore experience a lower rate of depression. This suggests that even if there is social support for women at an early age, they are more susceptible to depression than later ages. The results of our study are compatible with the results of Inandı et al. (2005) and Figueiredo et al. (2007).

It is a fact that, as the level of education increases, the perception of both pregnancy and postpartum social support increases, and it affects the perception of postpartum depression (Durukan et al. 2011, Mermer et al. 2010, Vırıt et al. 2008, Eren 2000). In this study, it was found that the rate of depression of women with university and higher education level was lower than those who had lower education levels Table 3. In a cohort study conducted with 570 women in Geneva, it was observed that women who developed postpartum depression had low level of education in terms of professionalism (Righetti-Veltema et al. 1998). In a study conducted in 5 provinces in eastern and southeastern regions of Turkey in 2001, it was observed that there was a significant decreasing trend with increasing education level. According to the same study, the risk of postpartum depression in women without education was found to be 2 times higher than those had university graduates (Inandı et al. 2002). Arıkan

& Kahrima (2002) also found that as the education level of women increased, the perceived social support from family increased. Our study showed similarity with these data, it was observed that with the higher education level, the perceived social support increased and depression decreased.

Although there was no significant relationship between depression and employment status, it was found that working women perceived depression less than those who were not working, and that social support from friends and family was positively effective Table 3. As there were similar studies (Altınay 1999, Gözuysil 2003, Seguin, St-Denis and Loiselle 1995), on the other hand, there were also studies that found depression highere in non-workers (Ian, Gotlib and Valerie 1989).   We can say that the similarities and differences between the studies are due to the differences between working status and environments of pregnant women.

In our study, it was found that the perceived depression of women with extended family was higher than the women who had a nuclear family, and the friend support of the women who had a nuclear family was more adequate Table 3. In a study by Vırıt et al. (2008), the Beck Depression Inventory scores of pregnant women living in extended families were lower than those living in nuclear families. In the study of Mermer et al. (2010), there was a significant difference between the mean social support score and family types in both pregnancy and postpartum period. Similarly, in other studies (Okanlı, Tortumluoglu and Kırpınar 2003, Baklaya, 2002), in both pregnancy and postpartum period, it was found that the perception of social support was found to be significantly higher in women who had a nuclear family and that support in the nuclear family was more adequate. Our study results are in parallel with the results of the studies by Mermer et al. (2010), Okanlı et al. (2003), Baklaya (2002), and in the opposite direction with the results of the study conducted by Vırıt et al. (2008).

There are studies showing that depressive symptoms are more common especially in women with low socio-economic conditions during pregnancy (Seguin, St-Denis and Loiselle 1995, Lwellyn, Stowe and Nemerrof, 1997).  In our study, it was found that depression and social support mean scores were not statistically significant in terms of economic conditions

(p>0.05). When the variables were evaluated, it was observed that those with less income than expenses perceived the depression more and those who had equivalent income and expenses had highest perception of social support. Herrera et al. (1992) stated that the economic status of the family had an effect on pregnancy and birth complications. In the studies of Seguin et al. (1995) and Josefsson et al. (2002) conducted in western societies, it was stated that there was no relationship between socio-economic status and postpartum depression. Inandı et al. (2005) stated that the frequency of postpartum depression increased as the family income level decreased. Durukan (2011) stated that the frequency of postpartum depression increased as the family income decreased, whereas logistic regression analysis did not indicate a relationship between income level and postpartum depression. In the literature, it was stated that the feelings of loneliness and unsupported of women, anxiety about taking care of the baby and low family income can lead to postpartum depression (Ekuklu et al. 2004, Kara et al. 2001). Although there was no statistically significant result as a result of our study, it can be mentioned that our study results corresponded to results of the study conducted by Seguin et al. (1995), and when the variables were examined separately, our study has similarities with the studies conducted by Durukan (2011), Inandı et al.,   (2005) and Herrera et al. (1992).

The planning of pregnancy suggests that it facilitates the adaptation of the woman to her motherhood and enables her to spend this process more coherently with the presence of social support. In this study, it was found that women who had unwanted pregnancy perceived depression higher Table 4.

There was a statistically significant difference in the perception of social support according to the variable of wanted pregnancy (p=0.022). It was determined that the perception of social support was higher in the wanted pregnancies. Tasdemir et al. (2006) and Kara et al. (2001) in their similar studies showed that postpartum depression score increased in women who did not plan their pregnancies, but there was no statistically significant relationship. Ekuklu et al. (2004) determined that the prevalence of postpartum depression was high in unplanned pregnancy, there was a statistically significant difference between the woman's pregnancy planning status and the perceived social support

and postpartum depression scores, and it was observed that postpartum depression scores were lower. It was also determined that the frequency of postpartum depression was high in unplanned pregnancy. It was stated that unplanned pregnancy is a risk factor for postpartum depression (Righetti-Veltema et al. 1998, Barbara & Parry 1995). In the study of Vırıt et al. (2008), it was observed that those who were ready for motherhood had lower depression scores than those who were not ready. In a study conducted by Lau et al. (2007) on 2178 pregnant women in the second trimester, a positive correlation was found between unwanted pregnancy, young age and depressive results. In our study, it was determined that unwanted pregnancy situation of women had positive relationship with perceived social support, and had negative relationship with postpartum depression. The result of the study was found to be compatible with the scanned data for the variable of the pregnancy desire.

The mean scores of depression and perceived social support from family were found to be statistically significant in terms of participation in the pregnancy education / training classes during pregnancy (p<0.05) Table 4. Perception of depression was found to be approximately 1.8 times higher in those who could not participate in the pregnancy education. According to the results of the study, it can be mentioned that those who receive pregnancy education will benefit positively from the depression and social support perception and will adapt more easily to pregnancy and postpartum period.

In the study, it was observed that those with psychological problems in the pre-pregnancy period had 1.36 times more depression than those without. It was found that the social support perceived at the highest level compared to those without psychological problems in the pre-pregnancy period was the support they received from their families Table 4. In the literature, it was found that perceived friend and family support scores of the patients diagnosed with depressive disorder were significantly lower than the normal individuals, whereas social support had a positive effect on the health of the person, and the most effective source for support was reported as the nuclear family members and relatives (Neziroglu 1992).The prevalence of postpartum depression in some studies conducted in Turkey on this subject was found between 14.0%-40.4% (Danaci et al. 2002). Psychological adaptation to pregnancy can be facilitated by

reducing pregnancy-related fear and anxiety (Kugu & Akyuz 2001). The presence of mental problems in pregnancy or in the prenatal period will bring difficulties in obtaining social support and will prepare the ground for postpartum depression. In our study, the presence of psychological problems before pregnancy shows the negative effect of the postpartum period.

In studies conducted in Turkey, it was stated that the prevalence of postpartum depression was ranged from 21.2% to 28% (Inandı et al.2002, Nur et al. 2004, Vural & Akkuzu 1999).  In our study, the frequency of postpartum depression was found to be 23.6%. When the literature was reviewed, it was observed that 13% of women who become mother first can develop clinical depression within the first few months of the postpartum period (O'hara & Swain 1996).  This rate can increase to 26% in adolescent women and 38.2% in low-income and women who gave birth for the first time (Troutman & Cutrona 1990, Hobfoll et al. 1995).  It is remarkable that postpartum frequency of our study was compatible with Turkey average.

Although the perception of depression was not statistically significant in the presence of the person who would support the care of the baby and the woman after birth, it was found that the perceived social support from the family was very high in the presence of the person who would support after birth. Those who did not receive spousal support after birth had a high level of perceived depression.

In previous studies, it was determined that the risk of postpartum depressive symptoms was higher in women who stated that they did not receive enough attention and support from their partners and who had problems in marital relationships, and that sufficient attention and support were positively affected both the health of women and the baby (Mckee et al. 2001, Josefsson et al. 2002, Goldbort 2006 Berlim & Flack 2007). The results of our study were compatible with the results of the studies conducted by Okanlı et al. (2003), Mckee et al. (2001), Josefsson et al. (2002), Goldbort (2006) and Berlim (2007).

Social support provided by spouses, families and the close environment relieves the new mother emotionally and cognitively, thus helping her to cope more easily with stressors, and to enable her to perform the role of motherhood more

effectively (Lau & Morse 2001, Lee, Holditch-Davis and Miles 2007).

Although depression perception was not found to be statistically significant in the presence of a financial support person, it was found to be highly significant in terms of social support perception (p = 0.002) Table 5. It was found that women, who stated that they could get support from both their spouses and their families, perceived lower depression and higher social support. Here, we can say that the support that will come from families in the postpartum period will be much more effective in terms of depression.

In Table 6, the correlation analysis between perceived social support and depression revealed a significant negative correlation (r =-0,155; p = 0,083> 0,05), and the depression score decreased as the total perceived social support score increased. However, there was a negative correlation between friends, a special person and total social support score.

According to this, it was seen that the depression score was decreased as the total perceived social support score of a special person increased. It is known that the social support will facilitate the adaptation of the women to the pregnancy, birth, postpartum period and their coping with the problems in these periods (Tezel & Gozum 2005, Tasdemir, Kaplan and Bahar 2006, Herguner et al. 2014, Durukan et al. 2011). In our study, the result of decreasing depression with increasing social support is compatible with the studies conducted by, Tezel & Gozum (2005), Tasdemir et al. (2006), Herguner et al. (2014) and Durukan et al. (2011).

**Conclusion and Recommendations**

As a result of the study, it was found that the frequency of postpartum depression was 23.6% and its mean was 8.07 ± 6.42. When the perceived social support was examined, the perceived social support from the family was found to be 18.7%, from a special person 26.1%, from a friend 20.7%, and the total perceived social support score was 25.6%.

The mean social support was 60,276 ± 15,721, and there was a significant relationship between perceived social support and depression (p <0.05). In addition, it was observed that the perception of social support decreased the perception of depression.

**Recommendations based on the results of this study;**

- More efforts to ensure that social support is absolutely guaranteed during pregnancy and postpartum period,
- Training and activating all health personnel, especially midwives, in terms of social support,
- Early diagnosis by midwives of psychosocial problems that may occur during pregnancy and postpartum period,
- Preventing depression of pregnancy and postpartum periods and reducing the perception of depression will contribute to the development of a healthy mother, healthier family, therefore formation of healthy society.

**Conflict of Interest**

The authors have no conflicts of interest to disclose. The authors have disclosed that they have no significant relationships with, or financial interest in, any commercial companies pertaining to this article.

**Precis**

It was found that postpartum depression rate was lower in pregnant women which has received social support.

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