A comparative study of postnatal depression in mothers with normal delivery and cesarean

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Abstract

Postpartum depression is a clinical syndrome with a combination of physical and mental illness, and behavioral changes and its symptoms are similar to those of major depression that occurs at other times which are depressed mood, sleep disturbance, anxiety, loss of interest, feelings of guilt, suicidal thoughts, despair, hopelessness, loss of appetite, decreased libido, and irritability:and unfortunately, leave devastating effects on the lives of children, mothers and families and identifying factors affecting it can reduce losses due to it:in this regard, the present study aims to examine a possible risk factor in this context which is the method of delivery. The sample included nulliparous women referred to health centers of Ferdows city during the study which were selected purposefully that among these, 49 patients had normal vaginal delivery and 46 patients had cesarean section. During the second and third months after delivery they responded to questions of 21-point depression scale of Beck. Questionnaire data were analyzed using SPSS software. Results of the study showed that in the field of prevalence of depression, nearly 31 percent of people were with mild depression and 5 percent had severe depression after giving birth. But no significant difference was observed between the rates of postpartum depression in mothers with vaginal delivery ($\mu=10.326$) and by cesarean ($\mu=11.43$) in 95% confidence level. According to the results of the study, despite the fact that rates of postpartum depression in mothers with cesarean section is more than mothers with vaginal delivery, But this difference is not statistically significant, and we can say that the method of delivery has not significant influence on the rate of postpartum depression.

INTRODUCTION

Depression is one of the most common mental illnesses among different communities, and it is anticipated that In 2020, it will be as the second most common disease after heart- cardiovascular disease and will include 15 percent of all diseases [7]. The number of patients with this disease in the world, at any time is estimated about 340 million people. Depression in 1990 was fourth Among 15 diseases of the first category. Postpartum depression is one of depression. It is largest suffer of women and has negative consequences on social relations and infant development; Therefore, it is one of the most important problems that threatens life for mothers, baby and family.

Postpartum depression is a clinical syndrome with a combination of physical and mental illness, and behavioral changes after child birth, some women do experience it. The prevalence of postpartum depression in studies done in the world reported 10 to 20 percent (average 13 percent). Epidemiological studies have shown that the highest risk for developing depression is 6 months after delivery and its peak is first few weeks after delivery. Its symptoms depressed mood, sleep disturbance, anxiety, loss of interest, feelings of guilt, suicidal thoughts, despair, hopelessness, loss of appetite, decreased libido, and irritability. Recognizing depression in the postpartum period is important. The earlier the disorder is recognized, treatment and prognosis will be better and its devastating effects on the mother, family and society will decrease. [12]

Depressed mothers feel less liability for the infant and face Complex problems in interacting with the baby [14]. In addition that the cognitive and emotional development of the child is severely threatened, it may lead to neglect and abuse in baby care. In addition, depressed mothers are impaired in their social activities, individual


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performance and housekeeping duties. Depression disrupts their relationship with the wife, and often wives of women with depression are also suffering from depression [16]. If untreated, 25% of these patients suffer from persistent depression or progress toward psychosis.

In order to minimize the adverse effects of postpartum depression on families, prevention and early treatment seems necessary [13]. Prevention requires proper enhancement factors [14] and attenuation factors of depression. These factors can be divided into biological, psychological, social and hormonal factors [15]. One factor contributing to the investigation, the type of delivery, about the influence of mode of delivery on postpartum depression, studies have been conducted and conflicting results have been obtained. Carter et al., also studied the Results of Twenty-four of the researches about Cesarean delivery and postpartum depression. Their study was a meta-analysis. Their results showed that in 5 cases of cesarean delivery and postpartum depression, there is a significant relationship, while the 15 studies did not report any significant relationship between two variables. Clement conducted a meta-analysis study and concluded that among studies conducted in eighteen studies, researchers stated that Women who have given birth to their babies by cesarean section, less than women vaginal delivery, were satisfied with experience of childbirth. On the other hand, in eleven studies, researchers reported that women with cesarean delivery are suffering from depression more than women with normal delivery; although about depression of the two groups, nine other studies have not reported significant differences between the two groups. According to the results of studies on the relationship of type of delivery and rate of depression after childbirth, generally they can be divided into three categories: First set are those whose results showed a significant relation between the type of delivery and depression after delivery and stated that Risk of postpartum depression in women with cesarean section is more than women with vaginal delivery. Baghiani Moghadam et al. evaluated and compared Postpartum depression in mothers with both vaginal and cesarean delivery. Their sample included 60 mothers with normal deliveries and 60 caesarean mothers who were referred to health centers of Yazd city, Iran. Selected samples, within one to four months after delivery, completed the Beck Depression Inventory. Their results showed that there are significant differences between the two groups of mothers with postpartum depression. Such that the rate of postpartum depression in mothers with cesarean delivery was more than mothers with normal deliveries. Nikpour et al. Compared quality of life in women after normal vaginal delivery with cesarean section. This prospective study was conducted on 420 pregnant women aged 35-16 years with no history of medical, psychiatric, and obstetric problems, with no experience of stressful events in the past 9 months and no drug addiction, referred to the health care centers, and were selected by non-probability sampling method and completed Edinburgh Depression Scale in the last three months of pregnancy. Of 290, 148 samples in vaginal delivery group and 142 in cesarea delivery group were followed up for eight weeks after delivery. And their quality of life was assessed and compared with the QOL tools outlined by the World Health Organization in domains of physical, psychomotor, social, environmental. Their findings showed that the mean score for psychomotor domain of quality of life in vaginal delivery group (73.14 ± 14/71) was significantly higher than the mean score of cesarean delivery group (69.23 ± 13/71) (p=0.024).

Dolatian et al. in 2006 conducted a study to investigate the Relationship between Type of delivery and subsequent depression. Their study was a prospective analysis. In this study, 148 patients of whom 73 had a normal vaginal delivery and 75 cesarean section. For example, from 2 to 6 weeks after delivery were examined. The results showed that the prevalence of postpartum depression was 20.3% from which 13.6% had normal delivery and 6.27% of them had cesarean section. Statistical analysis showed a significant relationship between mode of delivery and postpartum depression and relative risk of depression was OR=2.

In another research done by Torkan assessed Maternal depression in two stages 6 to 8 and 12 to 14 weeks after delivery using postpartum depression questionnaire. The average age of mothers in the group of normal delivery was up to 24 and a half years and in cesarean Group was 25 years and most of mothers had secondary education. Findings of this study indicated that vaginal delivery Have better mental health than cesarean group. Hadizadeh Talasaz et al. in their research compared the rate of depression in women after vaginal delivery and emergency cesarean for the first time, referred to 22 Bahman hospital in Gonabad city, Iran. Their study was a descriptive cross sectional study. A sample of 52 nulliparous women studied. The instrument used was a questionnaire which subjects were given 45 days after delivery. The results showed that means of postpartum depression in emergency cesarean is more than the mean in vaginal delivery (10.84 to 7.84). Based on the t-test difference between two groups was significant about postpartum depression. Behboudi Moghadam et al. carried out a research about the prevalence of postpartum depression and its influencing factors in women referred to health centers of ShahidBeheshti University of Medical Sciences in Iran. The results showed that postpartum depression in women with vaginal delivery was significantly lower than postpartum depression in women undergoing cesarean. Fisher et al. in 1997, To evaluate the effect of depression after the birth, studied 272 nulliparous pregnant women in the third trimester of pregnancy and then at weeks 4 to 6 after pregnancy. To investigate damaging psychological factors in obstetric surgery and concluded that there is a significant relationship between cesarean and delivery performed by the machine and postpartum depression. Boyce and Todd In a study, evaluated increasing risks of postnatal depression for Mothers with cesarean delivery. To do
this, they have included a sample of 188 nulliparous women in both groups with normal delivery and cesarean section and in the third to sixth months after delivery, the Edinburgh questionnaire were provided to them. Their results showed that the rate of postpartum depression in women undergoing cesarean delivery is more than women with normal.

In second category, The relationship between delivery type and depression after delivery were examined and concluded that Postpartum depression in women with normal vaginal delivery id more than cesareaned women.

Farzad and Bahare Ghazi M.S [60] in examining the Relationship between Type of delivery and early symptoms of postpartum depression, were evaluated 200 pregnant women before and after delivery using Beck test. The results of their study showed that 55 percent of women after delivery suffer from the early signs of depression and in cesarean delivery; the risk of depression was not significantly higher than vaginal delivery but the severity of symptoms of vaginal delivery was more than cesarean section. Studies of Chapa et al in Lebanon showed that Depression in women undergoing cesarean is less than with vaginal delivery. Studies of Khorrami Rad et al determined the prevalence of postnatal depression and associated factors in the city of Qom. In this research, 300 mothers who passed 6 to 12 weeks of their delivery, were examined. According to their results, the type of delivery has no significant effect on and postpartum depression. Sharifi et al conducted a research about the relationship between type of delivery and postpartum depression in Kashan, Iran. They studied women referred to the in second and third months after delivery to care centers in Kashan in two groups of Depressed and non-depressed. Their results did not show any relationship. Hoseini et al in their study about postpartum depression and its related factors in Kermanshah city of Iran, their results also did not show any relationship between type of delivery and postpartum depression. In another studies done by Zahraei et al [43] in Isfahan and Sadr et al in Tehran also showed that the type of delivery does have significant influence on postpartum depression in women.

Therefore, according to different results in different countries, it is still needed to review and research about this relationship in the different communities. In this regard, in the present paper, with a comparative study of postpartum depression in women with vaginal delivery and cesarean, the effect of delivery on postpartum depression among nulliparous women referred to health centers of Ferdows city will be studied.

MATERIALS AND METHODS

The current study according to the selected variables and hypothesized relationships among variables is a descriptive a comparative study in two groups of experimental and control. Following the review of the influence of depression after childbirth. The study population consisted of all nulliparous women referred to health centers of Ferdows city during the study. Indices of entering the study include: infant and mother being alive and having at least a fifth grade education. Exclusion indices included: Near Death Experience In recent years, a family history of depression, abnormalities of infant, infant mortality, maternal hospitalization and having severe problems after delivery, such as bleeding or infection, and illiteracy. The study subjects were randomly selected from among eligible individuals whose number was equal to 95, of which 49 patients had normal vaginal delivery and 46 patients had cesarean section. They responded to questions of 21-point depression scale of Beck.

During the second and third months after delivery which is the most suitable time for surveying depression.

In this study to collect data to answer questions, the field method has been used mainly and in formulating hypotheses and initial models, library methods (reading books, articles, journals, research projects and databases, Internet) are used. In the present study to evaluate the amount of postnatal depression, the Beck Depression Inventory is used. Beck Depression Inventory for the first time was developed by Beck et al in 1961. In 1996, Beck and his colleagues to cover a wide range of symptoms and diagnostic criteria for consistency with depressive disorders, Diagnostic and Statistical Manual of Mental Disorders, They did a major revision. In the revised form to reflect symptoms associated with severe depression, four items were changed. Also to show a decrease in appetite and sleep, the two of them were revised. The questionnaire consisted of 21 questions designed to measure attitudes and depressive symptom and provisions have been prepared and purified essentially based on observed signs and attitudes prevalent among psychiatric patients with depression. The test materials consist of a total of 21 items with various signs, a four-point scale on which subjects should be answered from zero to three. The materials are in areas such as sadness, pessimism, sense of failure, guilt, sleep disturbances, loss of appetite, self-hate, and etc., in this way that two of them was dedicated to emotion, 11 to cognition, 2 to overt behavior, 5 to somatic symptoms, and one is dedicated to Interpersonal Semiotics. Thus, this scale defines varying degrees from mild to severe depression, and the range of scores from zero to a maximum of 63. The following scores can be used to indicate the overall level of depressive:

0 to 13: no or minimal depression, 14 to 19: mild depression, 29 to 63: severe depression.

About Reliability and validity of the questionnaire it must be said that due to the importance of this tool in the diagnosis of clinical intervention, psychometric researches have been done regarding its psychometric properties. One of these important studies is a meta-analysis in 1988 by Beck, Istir and Garbin. Beck and his colleagues by reviewing studies that had used the tool found that Test-retest reliability coefficients using the
method based on the interval between the run and the types of test items is varied from 0.48 to 0.86. Beck and colleagues once again obtained test-retest reliability coefficient during one week in 1996 as 0.93. Various researches have been done about the validity of the Beck Depression Inventory, as well. The mean correlation of the Beck Depression Inventory, with Hamilton Psychiatric Rating Scale, Zung Depression Scale, and Multiple emotional traits Depression Scale was more than 0.60. Tashakori and Mehrar in 1975 found its reliability as 0.78, and in other research done by Partovi, Vahabzadeh and Chegini, reliability was reported as high between 0.70 to 0.90. In the present study, the Cronbach alpha coefficient for Inventory was equal to 0.897 for 21 items.

RESULTS AND DISCUSSION

The majority of subjects in this study were 19 to 25 years (52.7%) and the lowest was 18 years of age (2.3 percent). The data also showed that the majority of women work at home (75 percent). Demographic data of the subjects, shown in Table 1. In order to assess significant differences between any of the demographic characteristics and depression among postpartum women chi-square test was used. The results of the test are given in Table 1. As seen, From the statistical viewpoint at the 95 percent confidence level, there is no significant difference in rates of postpartum depression in women of different ages (p=0.068>0.05), different jobs (p=0.383>0.05) and different levels of education (p=0.082>0.05).

Table 1: Demographic characteristics of the sample and the results of statistical test

<table>
<thead>
<tr>
<th>Demographic characteristics</th>
<th>Age</th>
<th>No.</th>
<th>%</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Less than 18</td>
<td>3</td>
<td>3/2</td>
<td>3</td>
<td>0.444</td>
<td>2/457</td>
<td>0.068</td>
</tr>
<tr>
<td></td>
<td>19-25</td>
<td>49</td>
<td>52/7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>26-35</td>
<td>37</td>
<td>39/8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>36 years and older</td>
<td>6</td>
<td>4/3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sum</td>
<td>93</td>
<td>100/0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Indeterminate</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job</td>
<td>Employee</td>
<td>7</td>
<td>8/0</td>
<td>4</td>
<td>0.200</td>
<td>1/058</td>
<td>0.383</td>
</tr>
<tr>
<td></td>
<td>Teacher</td>
<td>6</td>
<td>6/8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Housekeeper</td>
<td>66</td>
<td>75/0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Student</td>
<td>6</td>
<td>6/8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>3</td>
<td>3/4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sum</td>
<td>88</td>
<td>100/0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Indeterminate</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level of Education</td>
<td>Illiterate</td>
<td>3</td>
<td>3/2</td>
<td>4</td>
<td>0.153</td>
<td>1/001</td>
<td>0.082</td>
</tr>
<tr>
<td></td>
<td>Less than high school diploma</td>
<td>7</td>
<td>7/4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Diploma</td>
<td>26</td>
<td>27/4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bachelor</td>
<td>56</td>
<td>58/8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Master’s degree or higher</td>
<td>3</td>
<td>3/2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sum</td>
<td>95</td>
<td>100/0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Study of Depression in women showed that the majority of people are in lower levels of postpartum depression. Table 2 shows details about the rate of the depression in groups. As can be seen, the number of people with severe depression I cesareaned women is more than women with normal vaginal delivery.

Table 2: postpartum depression Rate in studied groups

<table>
<thead>
<tr>
<th>groups</th>
<th>Minimal depression</th>
<th>Mild depression</th>
<th>Severe depression</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women with vaginal delivery</td>
<td>Abundance</td>
<td>33</td>
<td>10</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Frequency</td>
<td>67/3</td>
<td>20/4</td>
<td>12/3</td>
<td></td>
</tr>
<tr>
<td>cesarean women</td>
<td>Abundance</td>
<td>28</td>
<td>11</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Frequency</td>
<td>69/8</td>
<td>24</td>
<td>15/2</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>Abundance</td>
<td>61</td>
<td>21</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Frequency</td>
<td>64/3</td>
<td>22/1</td>
<td>13/6</td>
<td></td>
</tr>
</tbody>
</table>

For comparison of postpartum depression in women with vaginal delivery and cesarean section, the test was used to compare the two groups. Test results are shown in Table 3.

Table 3: Test comparing postpartum depression, in two groups of Mothers with vaginal delivery and cesarean

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>N</th>
<th>df</th>
<th>Mean difference</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>postpartum depression</td>
<td>vaginal delivery</td>
<td>49</td>
<td>93</td>
<td>- 1/108</td>
<td>0/006</td>
<td>0/938</td>
</tr>
<tr>
<td></td>
<td>cesarean section</td>
<td>46</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As can be seen, despite the fact that the rate of postpartum depression in cesareaned women (μ=11.43) is higher than postpartum depression in Mothers with normal delivery (μ=10.326) But this difference is not
statistically significant (at the 95% confidence level) and it can not be argued that the method of delivery has significant influence on subsequent depression.

Conclusion:

According to the results of the study it was found that the method of delivery has no significant effect on postpartum depression in mothers. In other words, despite the fact that the mean depression of mothers with normal delivery is less than average of this variable in Mothers undergoing cesarean; However, this difference was not confirmed. The result is not consistent with the results of some studies such as Mangeli et al., Abedian et al., Dolatian et al [59], Farzad and Bahareh Ghazi M. [60], Torkan [37], HadizadehTalasaz et al, Behboudi Moghadam, Edloya et al, Fisher et al, and Boyce and Todd, but is consistent with the findings of Soleymanian et al, Sharifi et al and Khorrami Rad et al. Researchers believe that the lack of significant relationship between postpartum depression and the type of delivery and slightly higher levels of depressive symptoms in women with vaginal delivery, maybe is due to this that Cesarean mothers receive more support from her family and husband and take care of them is more than mothers with normal deliveries and because of the assist in providing care for the child they receive, fatigue, insomnia and exhaustion in them is less and resting and recovering period in them last longer.

The other results can be pointed to the lack of significant differences in postpartum depression in individuals according to their age which was consistent with findings of Khorrami Rad et al. A number of studies know low maternal age as the risk factor and older age as protective factor for postpartum depression [1] but others identified age older than 30 years as a risk factor. This disagreement can be justified that in Western countries, lower gestational age, is unwanted or out of range of marital relations. These factors plus the lack of family support increases the risk of postpartum depression.

On the other hand, high maternal age in some communities such as our society has been associated with larger number of children, unwanted pregnancies and lack of willingness to accept the responsibility to care for other children in addition to the imposition of financial difficulties in the wake of the new child’s birth. These factors, in turn, increases the stress of older mothers and leads them into depression.

Findings did not show significant relationship between postpartum depression and women’s educational level. Studies of Najafi et al, Khorrami Rad et al, Ahmadi and Azari, Seger et al and Tanos et al also did not show a statistically significant relationship between the two variables, but study of Chaya et al did; Such that women with lower education levels are more prone to this disorder. Studies of Zahraei et al revealed that higher education reduces the chances of postpartum depression. Higher education may lead to better jobs, higher incomes and a more conducive environment and increasing social support and these factors can make it easier to deal with stress.

The findings of the study showed that a significant relationship was not found between postpartum depression and women’s job, studies of Hadizadeh et al and Sadr et al also did not show this relationship but studies of Zahraei et al and Najafi et al showed that housewives are at higher risk for postpartum depression. It seems, employed people because of most social contact and contact with colleagues, have more support and social support, makes stress tolerance easier. Additionally, these people usually have a higher education level which is one of the factors that can reduce the symptoms of postpartum depression. Also, probably high income of working people of the factors that makes it easier to cope with stress. In addition, loneliness and low self-esteem may be more effective at a higher frequency of depression in unemployed women.

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