

Accepted Manuscript

Accepted Manuscript (Uncorrected Proof)

Title: Postpartum Depression in Mothers of Children with Cleft Lip and Palate

Authors: Parastoo Namdar¹, Hossein Abdali², Atena Shiva³, Mehdi Pourasghar⁴, Sahar Talebi^{5,*}

1. *Orthodontic Department, Dental Research Center, Faculty of Dentistry, Mazandaran University of Medical Sciences, Sari, Iran.*
2. *Department of Surgery, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran.*
3. *Department of Oral and Maxillofacial Pathology, Faculty of Dentistry, Mazandaran University of Medical Sciences, Sari, Iran.*
4. *Psychiatry and Behavioral Sciences, Department of Psychiatry, Psychiatry and Behavioral Sciences Research Center, Addiction Institute, Mazandaran University of Medical Sciences, Sari, Iran.*
5. *Dentist, Craniofacial and Cleft Research Center, Isfahan University of Medical Sciences, Isfahan, Iran.*

***Corresponding Author:** Sahar Talebi, Dentist, Craniofacial and Cleft Research Center, Isfahan University of Medical Sciences, Isfahan, Iran. E-mail: dds.pnamdar@gmail.com

To appear in: **Journal of Pediatrics Review**

Received date: 2023/09/09

Revised date: 2023/10/31

Accepted date: 2024/02/05

This is a “Just Accepted” manuscript, which has been examined by the peer-review process and has been accepted for publication. A “Just Accepted” manuscript is published online shortly after its acceptance, which is prior to technical editing and formatting and author proofing. Journal of Pediatrics Review provides “Just Accepted” as an optional and free service which allows authors to make their results available to the research community as soon as possible after acceptance. After a manuscript has been technically edited and formatted, it will be removed from the “Just Accepted” web site and published as a published article. Please note that technical editing may introduce minor changes to the manuscript text and/or graphics which may affect the content, and all legal disclaimers that apply to the journal pertain.

Please cite this article as:

Namdar P, Abdali H, Shiva A, Poursaghar M, Talebi S. Postpartum Depression in Mothers of Children with Cleft Lip and Palate. Journal of Pediatrics Review. Forthcoming 2024.

Abstract

Background: Postpartum depression (PPD) is a subtype of major depressive disorder, which appears to be correlated with having an infant with cleft lip and palate (CL/P).

Objectives: Since there is a dearth of research in this regard, this study aimed to compare the mothers of infants with CL/P and mothers of normal infants regarding PPD and suicidal thoughts.

Methods: This descriptive-analytical study was conducted on 50 mothers of children with CL/P and 50 mothers of normal children who had recently given birth, and presented to the Research Center of Cranial Deformities, Isfahan University of Medical Sciences, Isfahan, Iran, between September 2020 and 2021. The Edinburgh Postnatal Depression Scale (EPDS) was used to assess PPD.

Results: The mean PPD score was 15.42 ± 4.77 (range 5-24) and 10.3 ± 6.7 (range 0-29) in mothers of children with CLP and those with normal children, respectively. The frequency of PPD was significantly higher among the mothers of CLP children, compared with mothers of normal children ($\chi^2=25.25$; $P<0.005$). No difference was reported between the mothers with PPD and those without it in terms of educational level ($\chi^2=0.36$; $P=0.83$), occupational status ($\chi^2=0.13$; $P=0.71$), or parity ($P=0.93$). Having suicidal thoughts had no significant correlation with having CLP children ($P=0.11$).

Conclusion: The PPD score and frequency of PPD were higher among mothers of children with CLP, compared with mothers of normal children; however, the frequency of suicidal thoughts was not significantly different between the two groups. Educational level, occupational status, and parity were not correlated with PPD or suicidal thoughts.

Keywords: Cleft lip and palate, Maternal, Infant, Postpartum depression

Introduction

Maternal mental health is an important topic with a remarkable impact on children's health and wellbeing. It is possible that depressed mothers pay less attention to health status of their children since lower rate of referral for age-appropriate care for children and delay in vaccinations have been reported for infants with depressed mothers (1).

Postpartum depression (PPD) is a subtype of major depressive disorder and a serious mental health problem, the onset of which is during the first year after delivery. It commonly occurs within the first 3 months after birth (2). PPD is experienced by 13% to 19% of childbearing women (3). The incidence of PPD has been estimated at 11.5% in the United States (4). Based on a systematic review, the prevalence of PPD is 25.3% in Iran (5). Assessment of the related factors to PDD is highly important since it plays a fundamental role in maternal morbidity and mortality. Evidence confirms the correlation of fetal anomalies and mothers' PPD score (6).

Orofacial clefts are among the most common congenital anomalies that appear to affect the incidence of PDD. The mental health of mothers who have given birth to infants with cleft lip and/or palate (CL/P) is a crucial research topic (7). One study found that nearly 12% of these mothers exhibited symptoms of depression, as measured by the Edinburgh Postpartum Depression Scale (EPDS). A significant proportion of these mothers reported self-blame (68.9%), difficulties in coping (59.2%), and feelings of anxiety (57.3%) (8). Another study conducted in Turkey found that mothers of infants with a cleft experienced increased stress due to factors such as postnatal diagnosis, inability to breastfeed, feeding complications, lack of paternal support, perceived challenging infant temperament, feelings of blame and anger, and concerns about the future. These findings underscore the importance of providing comprehensive support and intervention for these

mothers (9). According to a previous study, the risk of depression 2 months after birth was higher among mothers of infants with CL/P, compared with mothers of normal infants (10). However, very few studies have assessed the incidence of PDD in mothers of infants with CL/P.

Since some critical issues such as the nutritional status of newborns in early days after birth may be affected by maternal mental conditions, assessment of the relationship of PPD and having an infant with CL/P is important (7). However, the majority of relevant available studies have focused on the stress level of mothers with CL/P children (11, 12). Thus, this study aimed to compare the mothers of infants with CL/P and mothers of normal infants regarding PPD and suicidal thoughts.

Materials and Methods

This descriptive-analytical study was conducted on all mothers of children with CL/P, who had recently given birth and presented to the Research Center of Cranial Deformities, Isfahan University of Medical Sciences, Isfahan, Iran, between September 2020 and 2021.

Inclusion and Exclusion Criteria: The inclusion criteria were having a child with CL/P, willingness to participate in the study, and referral at 2-4 weeks after delivery. Mothers taking antidepressants at the time of enrollment, those with a history of untreated prenatal depression, and those who refused to participate in the study were excluded.

Given the study's objectives, the prevalence of cleft lip and palate in Iran ($p=0.15$) (13), and a confidence interval of 0.95, the sample size was estimated to be approximately 45 cases using the specified formula. However, to account for potential sample dropouts, the total number of samples was increased to 50. Additionally, 50 mothers with healthy children were included as the control group, resulting in a total of 100 samples examined.

$$n = \frac{Z_{1-\frac{\alpha}{2}}^2 P(1-P)}{d^2}$$

Study Design:

A questionnaire was filled out for each participant covering demographic characteristics such as age, level of education, occupational status, parity, and history of PPD in previous pregnancy. After completing the questionnaire, the collected information was categorized. The EPDS was filled out by a family health associate at a client health center. Each question in this 10-item scale was scored 0 to 3 based on the severity of signs and symptoms. This questionnaire has been designed to assess the presence/absence of depression from 6 weeks postpartum on. Items 1, 2, and 4 are scored 0 to 3, and items 3, and 5-10, are scored 3 to 0. The items were rated using a 4-point Likert scale. The sum of all item scores was calculated and reported as the PPD score. The EPDS total score can range from 0 to 30, and a score above 12 indicates the presence of PPD. Higher scores indicate higher severity of PPD (14). The validity and reliability of EPDS have been previously confirmed in Iran by Montazeri et al. (15). In the present study, the Cronbach's alpha coefficient for the EPDS was calculated to be 0.70. The EPDS questionnaire was completed by both sets of parents - those with healthy babies and those with CL/P babies who were referred to our center. The results from these two groups were then compared.

Statistical Analysis:

After completing the questionnaire, the collected information was categorized, entered into SPSS software version 21, and analyzed. Descriptive and demographic characteristics were presented as frequency distribution tables and graphs. The relationship between quantitative variables was

analyzed by the t-test or its nonparametric equivalent if the data distribution was not normal. A significance level of 0.05% was considered in all calculations.

Ethical Considerations:

This study was approved by the ethics committee of the university (IR.MAZUMS.REC.1399.566). In this study, all ethical considerations were observed, and the information obtained through the questionnaires remained completely confidential. Furthermore, informed consent was obtained from all participants, and individuals who were suspected for PPD were referred to a psychiatrist for further assessment and treatment.

Results

This study compared 50 mothers of children with CLP with 50 mothers of normal children. The mean age of mothers was 27.49 ± 6.1 years (range 15 to 38 years). The mean age was 27.66 ± 5.94 years (range 18-38 years; median: 29 years) in mothers of children with CLP, and 27.32 ± 6.32 years (range: 15-38 years; median: 29 years) in mothers of normal children. The two groups had no significant difference regarding the mean age ($t=0.28$; $P=0.76$). The frequency of other demographic characteristics is shown in Table 1. The mean PPD score was 12.86 ± 6.33 (range: 0-29).

The mean PPD score was 15.42 ± 4.77 (range 5-24) in mothers of CLP children, and 10.3 ± 6.7 (range 0-29) in mothers of normal children after 2 to 4 weeks. Comparison of the two groups showed a significant difference in this regard ($t=4.4$; $P<0.005$). The mean PPD score was 15.42 ± 4.77 (range 5-24) in mothers of CLP children, and 10.3 ± 6.7 (range 0-29) in mothers of normal children after 2 to 4 weeks. Comparison of the two groups showed a significant difference in this regard ($t=4.4$; $P<0.005$). Comparison of PPD scores in terms of age, educational level,

occupational status, and birth rank of the child is presented in Table 2. Based on the obtained results, the PPD score was not significantly correlated with age, educational level, occupational statuses, or birth rank of children ($P>0.05$).

Table 3 compares mothers with and without PPD in terms of having CL/P or normal children, their educational level, occupational status, and parity. Comparison of mothers with PPD and those without it showed that the frequency of PPD was significantly higher among mothers with CLP children, compared with mothers of normal children ($\chi^2=25.25$; $P<0.005$). No significant difference was reported between mothers with PPD and those without it in terms of educational level ($\chi^2=0.36$; $P=0.83$) or occupational status ($\chi^2=0.13$; $P=0.71$). Moreover, there was no difference between mothers with PPD and those without PPD in terms of parity ($P=0.93$).

Table 4 shows the association of suicidal thoughts with having a CL/P or normal child, educational level, occupational status, and parity. Suicidal thoughts had no significant correlation with having a CL/P child ($P=0.11$). No significant difference was found between mothers with suicidal thoughts and those without suicidal thoughts in terms of educational level ($P>0.99$), occupational status ($P>0.99$), and parity ($P=0.16$).

Discussion

Based on the obtained results, the PPD score and frequency of PPD were higher among mothers of children with CL/P, compared with mothers of normal children; however, the frequency of suicidal thoughts was not significantly different between the two groups. Educational level, occupational status, and parity were not significantly different between mothers of children with CL/P, and mothers of normal children.

Detection of social withdrawal behaviors is of utmost importance, especially in the first months after delivery. Such behaviors should be treated promptly due to their association with infant's nutrition, especially in infants with a medical condition, as observed in children with CL/P (16). Grollemund et al, in 2020 showed that children's social withdrawal was not correlated with the severity of their cleft; but it was associated with stress and distress levels of their mothers (17). Therefore, assessment of the psychological condition of mothers with CL/P infants and the related risk factors is highly important. However, very few studies have evaluated postpartum mental condition of mothers with CL/P infants.

To the best of the authors' knowledge, the present study is the first to compare mothers of infants with CL/P and mothers of normal children regarding PPD and suicidal thoughts in Iran. Although no study has assessed the suicidal thoughts in mothers of children with CL/P, some studies have examined PPD in these mothers. One multicenter study by Grollemund et al. assessed the effect of having a baby with CL/P on parent-infant relationship. Based on the obtained results, the PPD scores were higher in parents (both mother and father) with CL/P infants, compared with the general population. Moreover, they found that maternal stress due to early intervention decreased at 4 months. Moreover, the waiting time between birth and the first surgical intervention was better accepted by parents who received a prenatal diagnosis (17). Stock et al. assessed the parental psychological adjustment after detection of CL/P in their children, and showed higher levels of general anxiety and depression in mothers of CL/P children, compared with the general population. Moreover, a higher rate of perceived stress was reported in both parents of CL/P infants (18).

In a similar retrospective study by Johns et al, the PPD frequency and its risk factors in mothers of children with CL/P were assessed. They showed that 11.7% of mothers had PPD based on EPDS. Moreover, self-blame, difficulty coping, and feeling anxious were reported by more than 50% of

them. Higher anxiety and incidence of feeling scared were reported in mothers who did not receive a prenatal diagnosis of CL/P. They reported that lack of prenatal diagnosis and older maternal age were predictors for higher anxiety scores in mothers with CL/P infants. They reported a similar frequency of PPD among mothers with CL/P infants, compared with general population (9).

However, in the present study, 40% of mothers of children with CL/P had PPD; whereas, this rate was 10% in mothers of normal children. This difference may reflect the role of social support in the incidence of PPD among mothers with CL/P infants. The study by Johns et al. was conducted in the United States; however, the present study was performed in a developing country. Social support helps mothers adjust positively to stress-related growth and their infants' condition (19). However, social support for mothers of infants with CL/P is very low in developing countries. Moreover, insurance support is not sufficient to cover the treatment expenses of such infants. The frequency of PPD may be higher among mothers of children with CL/P in developing countries, compared with those living in developed countries, due to less availability of healthcare services, support, and insurance services in developing countries. However, John et al. showed no association between the type of health insurance and increased risk of PPD (19).

Screening for PPD is highly important in initial visits of mothers experiencing the symptoms of depression for additional support. Evidence shows that about 10% of indicating symptoms of depression occur at the first meeting of mother and baby. In cases of prenatal diagnosis, although the mothers have high stress due to frequent medical visits, they may also benefit from continuous healthcare services and social support. The initial shock of having a CL/P infant could be decreased by prenatal diagnosis and counseling about the problem. Prenatal diagnosis provides the parents with a chance to adjust to the situation and become prepared for their child's care (9). It appears that prenatal diagnosis plays an important role in maternal PPD; therefore, screening and assessing

the risk factors of CL/P are highly important for treatment planning. However, the effect of prenatal diagnosis was not evaluated in the present study.

Based on the results of a study by Johns et al, older mothers who did not receive a prenatal diagnosis had higher symptoms; moreover, in the general population, the risk of PPD was higher among younger mothers (9). However, in the present study, mothers' age was not correlated with PPD or suicidal thoughts. The effect of age on PPD should not be exaggerated since the role of age depends on other factors, such as unwanted pregnancy, financial problems, and being a single mother (20). Moreover, the present study rejected the role of educational level, occupational status, and parity in the occurrence of PPD.

Future multi-center studies with a larger sample size are recommended to verify the present results. Further studies on psychosocial aspects of cleft care are also suggested to assess the efficacy of each type of support for mothers of children with CL/P.

Strengths and Limitations

Although the present findings paved the way for assessing the role of having CL/P infants in PPD, it had some limitations. Small sample size and single-center nature of the study limit the generalization of results to other populations. Furthermore, due to self-reported nature of data, the results might be affected by the mothers' judgment. Moreover, the mothers' ability and their comprehension might have affected the completion process of the questionnaire. Additionally, prenatal diagnosis and receipt of healthcare services by the mothers were not assessed in this study, which may affect the accuracy of the results.

Conclusion

According to the present results, PPD had a significantly higher prevalence among mothers with CL/P infants, compared with mothers of normal children. However, no difference was reported between them in terms of suicidal thoughts. Given the consequences of maternal depression on infant development, the present results highlight the necessity of psychological support for mothers with CL/P infants, especially during the first year of treatment of children.

Accepted Manuscript (Uncorrected Proof)

References

1. Minkovitz CS, Strobino D, Scharfstein D, Hou W, Miller T, Mistry KB, et al. Maternal depressive symptoms and children's receipt of health care in the first 3 years of life. *Pediatrics*. 2005;115(2):306-14.
2. Field T. Postpartum depression effects on early interactions, parenting, and safety practices: a review. *Infant Behavior and Development*. 2010;33(1):1-6.
3. Pediatrics AAO. American College of Obstetricians and Gynecologists; Committee on Obstetric Practice. The Apgar score. *Adv Neonatal Care*. 2006;6:220-3.
4. Ko JY, Rockhill KM, Tong VT, Morrow B, Farr SL. Trends in postpartum depressive symptoms—27 states, 2004, 2008, and 2012. *MMWR Morbidity and mortality weekly report*. 2017;66(6):153.
5. Veisani Y, Delpisheh A, Sayehmiri K, Rezaeian S. Trends of postpartum depression in Iran: a systematic review and meta-analysis. *Depression research and treatment*. 2013;2013.
6. Kim AJ, Servino L, Bircher S, Feist C, Rdesinski RE, Dukhovny S, et al. Depression and socioeconomic stressors in expectant parents with fetal congenital anomalies. *The Journal of Maternal-Fetal & Neonatal Medicine*. 2021:1-7.
7. Parker SE, Mai CT, Canfield MA, Rickard R, Wang Y, Meyer RE, et al. Updated national birth prevalence estimates for selected birth defects in the United States, 2004–2006. *Birth Defects Research Part A: Clinical and Molecular Teratology*. 2010;88(12):1008-16.
8. Grollemund B, Dissaux C, Gavelle P, Martínez CP, Mullaert J, Alfaiate T, et al. The impact of having a baby with cleft lip and palate on parents and on parent-baby relationship: the first French prospective multicentre study. *BMC pediatrics*. 2020;20:1-11.
9. Johns AL, Hershfield JA, Seifu NM, Haynes KA. Postpartum depression in mothers of infants with cleft lip and/or palate. *Journal of Craniofacial Surgery*. 2018;29(4):e354-e8.
10. Murray L, Hentges F, Hill J, Karpf J, Mistry B, Kreutz M, et al. The effect of cleft lip and palate, and the timing of lip repair on mother–infant interactions and infant development. *Journal of Child Psychology and Psychiatry*. 2008;49(2):115-23.
11. Despars J, Peter C, Borghini A, Pierrehumbert B, Habersaat S, Müller-Nix C, et al. Impact of a cleft lip and/or palate on maternal stress and attachment representations. *The Cleft palate-craniofacial journal*. 2011;48(4):419-24.
12. Boztepe H, Çınar S, Özgür M, Fatma Figen. Parenting stress in Turkish mothers of infants with cleft lip and/or palate. *The Cleft Palate-Craniofacial Journal*. 2020;57(6):753-61.
13. Namdar P, Etezadi T, Mousavi SJ, Maleknia A, Shiva A. Frequency of cleft lip with or without cleft palate and related factors in a group of neonates in three Hospitals in Sari, Iran, during 2004-2018. *Journal of Mashhad Dental School*. 2021;45(2):178-87.
14. Levis B, Negeri Z, Sun Y, Benedetti A, Thombs BD. Accuracy of the Edinburgh Postnatal Depression Scale (EPDS) for screening to detect major depression among pregnant and postpartum women: systematic review and meta-analysis of individual participant data. *bmj*. 2020;371.
15. Montazeri A, Torkan B, Omidvari S. The Edinburgh Postnatal Depression Scale (EPDS): translation and validation study of the Iranian version. *BMC psychiatry*. 2007;7(1):1-6.
16. Re JM, Dean S, Mullaert J, Guedeney A, Menahem S. Maternal distress and infant social withdrawal (ADBB) following infant cardiac surgery for congenital heart disease. *World Journal for Pediatric and Congenital Heart Surgery*. 2018;9(6):624-37.
17. Grollemund B, Dissaux C, Gavelle P, Martínez CP, Mullaert J, Alfaiate T, et al. The impact of having a baby with cleft lip and palate on parents and on parent-baby relationship: the first French prospective multicentre study. *BMC pediatrics*. 2020;20(1):1-11.
18. Stock NM, Costa B, White P, Rumsey N. Risk and protective factors for psychological distress in families following a diagnosis of cleft lip and/or palate. *The Cleft Palate-Craniofacial Journal*. 2020;57(1):88-98.

.19 Baker SR, Owens J, Stern M, Willmot D. Coping strategies and social support in the family impact of cleft lip and palate and parents' adjustment and psychological distress. *The Cleft Palate-Craniofacial Journal*. 2009;46(3):229-36.

.20 Rich-Edwards JW, Kleinman K, Abrams A, Harlow BL, McLaughlin TJ, Joffe H, et al. Sociodemographic predictors of antenatal and postpartum depressive symptoms among women in a medical group practice. *Journal of Epidemiology & Community Health*. 2006;60(3):221-7.

Accepted Manuscript (Uncorrected Proof)

Tables

Table 1: Frequency of demographic factors in the two groups

| Variables | | Mothers of CL/P children | | Mothers of normal children | | Total | | χ^2 | P-value |
|---------------------------------------|---------------------------|--------------------------|----|----------------------------|----|-------|----|----------|---------|
| | | No | % | No | % | No | % | | |
| Educational level | Below high school diploma | 7 | 14 | 5 | 10 | 12 | 12 | 1.47 | 0.47 |
| | High school diploma | 19 | 38 | 15 | 30 | 34 | 34 | | |
| | Academic degree | 24 | 48 | 30 | 60 | 54 | 54 | | |
| Occupational status | Employed | 34 | 68 | 33 | 66 | 33 | 33 | 0.04 | 0.83 |
| | Housewife | 16 | 32 | 17 | 34 | 67 | 67 | | |
| Birth rank of the child | First | 35 | 70 | 35 | 70 | 70 | 70 | - | 0.35 |
| | Second | 11 | 22 | 14 | 28 | 25 | 25 | | |
| | Third | 4 | 8 | 1 | 2 | 5 | 5 | | |
| Complete response to all 10 questions | Yes | | | | | 9 | 9 | | |
| | No | | | | | 91 | 91 | | |

Table 2: Comparison of postpartum depression scores in terms of age, educational level, occupational status, and birth rank of the child

| Variables | | Mothers of CLP children | | F | P-value |
|---------------------|-------------------|-------------------------|------|-------|---------|
| | | Mean | SD | | |
| Age (yrs.) | < 20 | 13.62 | 5.52 | 1.57 | 0.21 |
| | 20-30 | 13.74 | 5.61 | | |
| | >30 | 11.41 | 7.33 | | |
| Educational level | Below High school | 12.92 | 4.17 | 0.003 | 0.99 |
| | High school | 12.79 | 6.31 | | |
| | Academic degree | 12.89 | 6.82 | | |
| Occupational status | Employed | 12.72 | 5.94 | 0.32 | 0.74 |
| | Housewife | 13.15 | 7.15 | | |
| Birth rank | First | 13 | 5.99 | 0.11 | 0.89 |
| | Second | 12.36 | 6.95 | | |
| | Third | 13.4 | 9.02 | | |

Table 3: Comparison of mothers with and without PPD in terms of having CL/P or normal children, educational level, occupational status, and parity

| Variables | | Depressed | | No depressed | | Total | | χ^2 | P-value |
|---------------------|-------------------|-----------|------|--------------|------|-------|----|----------|---------|
| | | No | % | No | % | No | % | | |
| Children status | CLP | 40 | 80 | 10 | 20 | 50 | 50 | 25.25 | <0.005 |
| | Normal | 15 | 30 | 35 | 70 | 50 | 50 | | |
| Educational level | Below High school | 6 | 50 | 6 | 50 | 12 | 12 | 0.36 | 0.83 |
| | High school | 20 | 58.8 | 14 | 41.2 | 34 | 34 | | |
| | Academic degree | 29 | 53.7 | 25 | 46.3 | 54 | 54 | | |
| Occupational status | Employed | 36 | 53.7 | 31 | 46.3 | 67 | 67 | 0.13 | 0.71 |
| | Housewife | 19 | 57.6 | 14 | 42.4 | 33 | 33 | | |
| Parity | First | 39 | 55.7 | 31 | 44.3 | 70 | 70 | ?? | 0.93 |
| | Second | 13 | 52 | 12 | 48 | 25 | 25 | | |
| | Third | 3 | 60 | 2 | 40 | 5 | 5 | | |

Table 4: Correlation of suicidal thoughts with having CL/P or normal children, educational level, occupational status, and parity

| Suicidal thoughts | | Sometimes | | Very rarely | | Most of the time | | P-value |
|---------------------|-------------------|-----------|------|-------------|------|------------------|-----|---------|
| | | No | % | No | % | No | % | |
| Children status | CLP | 3 | 37.5 | 5 | 62.5 | 0 | 0 | 0.11 |
| | Normal | 0 | 0 | 0 | 0 | 1 | 100 | |
| Educational level | Below high school | 0 | 0 | 1 | 100 | 0 | 0 | >0.99 |
| | High school | 1 | 33.3 | 2 | 66.7 | 0 | 0 | |
| | Academic degree | 2 | 40 | 2 | 40 | 1 | 20 | |
| Occupational status | Employed | 1 | 25 | 3 | 75 | 0 | 0 | >0.99 |
| | Housewife | 2 | 40 | 2 | 40 | 1 | 20 | |
| Parity | First | 2 | 28.6 | 5 | 71.4 | 0 | 0 | 0.16 |
| | Second | 1 | 50 | 0 | 0 | 1 | 50 | |
| | Third | 0 | 0 | 0 | 0 | 0 | 0 | |