Risk of Postpartum Depression in the Early Postnatal Period

MD Pozo Cano, RF Castillo, JF Guillen Solvas, JF Navio, IG García

ABSTRACT

Introduction: Postpartum depression is an important health problem because of its negative impact on the family. The objective of this study was to ascertain the risk of depression in new mothers who had recently given birth in public university hospitals in Granada and to identify the factors that most contributed to the onset of postpartum depression.

Materials and method: A descriptive study was made of a sample population of 370 new mothers, 18-46 years of age, who had given birth from January to May 2013. The subjects filled out the Edinburgh Postnatal Depression Scale (EPDS), a 10-item self-report scale. The women were also given a questionnaire that elicited sociodemographic and obstetric data. The EPDS cut-off score used was 10/11.

Results: The average EPDS score obtained was 6.12 with an interval of 0-25. Our results showed that 15.13% of the women in the study had scores equal of 11 or higher. Risk of postpartum depression had a statistically significant correlation with weeks of pregnancy (p=0.031), onset of labour (p=0.000), type of delivery (p=0.029), and reasons for not having epidural anaesthesia (p=0.038). It also had a significant positive correlation with the subject's obstetric history.

Conclusions: The majority of the women in the sample population had scores that did not exceed the risk threshold score identified in the study. As reflected in our results, the risk factors for postpartum depression were onset of labour, type of delivery, reasons for not having epidural anaesthesia, and parity.

Keywords: Edinburgh scale, postnatal depression, puerperium

From: Faculty of Health Sciences, University of Granada, Spain

Correspondence: Dr RF Castillo, Universidad de Granada. Facultad de Ciencias de la Salud, Parque Tecnológico de Ciencias de la Salud, Avd de la Ilustración s/n 18071, Granada, España/Spain.
Email: rafaelfernandez@ugr.es

RESUMEN

Riesgo de depresión postparto en el puerperio precoz

Introduccion: La depresión postparto es un importante problema de salud pública, debido al impacto negativo que tiene en la familia. Pretendemos conocer el riesgo de depresión postparto que pueden padecer las mujeres que dieron a luz en los Hospitales Públicos Universitarios de Granada e identificar los factores relacionados con la misma.

Material y método: Se realizó un estudio descriptivo con 370 puérperas entre 18 y 46 años que autocumplimentaron la Escala de Edimburgo y un cuestionario que recogía las características socio demográficas y obstétricas de las madres que dieron a luz en los Hospitales Universitarios de Granada de enero a mayo de 2013. El punto de corte utilizado fue de 10/11.

Resultados: Los valores resultantes de la Escala de Edimburgo fueron una media de 6,12 y 0-25 de intervalo, el 15,13% de las mujeres obtuvieron puntuaciones iguales o superiores a 11. Hubo significación estadística entre el riesgo de depresión y la semana de gestación (p=0,031), tipo de inicio de parto (p=0,000) y tipo de finalización (p=0,029), motivos por los que no se administró anestesia epidural (p=0, 038), y una correlación positiva y significativa con respecto a la formula obstétrica.

Conclusiónes: La mayoría de las mujeres de la muestra presentan niveles inferiores a la puntuación identificada por los investigadores como nivel de riesgo. Los factores encontrados en nuestro estudio relacionados con el riesgo de depresión posparto son tipo de inicio y finalización del parto, motivos por los que no se administra anestesia epidural y la paridad.

Keywords: Puerperio, depresión posparto, escala de Edimburgo.

INTRODUCTION

Pregnancy, childbirth, and the postpartum period are stages in life when women experience a series of social, psychological, and biochemical changes that make them more vulnerable to mental disorders (1). Depending on the severity and time frame of appearance, such disorders are classified as postpartum psychosis, postpartum dysphoria (maternity blues), and postpartum depression (2).

Approximately 1-2 postpartum psychoses occur per 1000 childbirths. Although postpartum psychosis is often confused with postpartum depression, it is more severe because it is characterized by typically psychotic symptoms such as delusions and hallucinations. Postpartum psychosis usually appears two weeks after childbirth and its duration varies. Women who develop this pathology have a 50% chance of suffering from it again in subsequent pregnancies. However, its prognosis is usually good though in certain cases, hospitalization is required (3).

Maternity blues or dysphoria is also known as postpartum despair. It has been reported to occur in 15-85% of new mothers. Common symptoms include mood swings, irritability, interpersonal hypersensitivity, tearfulness, and, occasionally, even euphoria. New mothers report that they are unable to cope and have difficulty adapting to their new situation. They also tend to feel tired, anxious, and overly sensitive. Weeping episodes that occur for no reason are typical of this disorder (5). Generally speaking, these symptoms, which are transient, appear within 10 days after giving birth, but rarely require intervention (4).

Despite the fact that maternity blues are a frequent occurrence and only last for a short time, accurate diagnosis is crucial since this mild disorder is an important risk factor for the subsequent development of postpartum depression. In their study of a sample population of German women, Reck et al. (2009) found a significant association between maternity blues

and postpartum depression. In fact, the estimated prevalence rate of maternity blues in the subjects was 52.2% (6).

Postpartum depression (PPD) is a frequent occurrence in women. As reflected in reviews on the topic, its prevalence ranges from 7% to 36%, depending on the type of study and the methodology used. The average prevalence is thus 13% (8) though percentages can vary from one country to another.

PPD is an important public health problem because of its negative impact not only on parents, but also on their children (9, 10). Certain studies highlight that the lack of attachment and negative mother-infant interaction in the early stages significantly affect future child development even when the mother no longer feels depressed. Postpartum depression is thus regarded as an important risk factor that negatively influences the short-term and long-term emotional and cognitive development of the child (11, 12).

PPD usually appears four to eight weeks after childbirth although in certain cases it can start at delivery or be the result of an ongoing depression that began during pregnancy (13). PPD has characteristics similar to those of a more severe depression (14), and generally lasts for more than two weeks. The symptoms, which go beyond mood swings and weeping episodes, include feelings of inadequacy, powerlessness, irritability, and a lack of sexual desire. In more serious cases, the mother may become obsessive and experience feelings of rejection towards the new-born. Furthermore, she may also feel guilty because of the discrepancy between her real mood and social expectations of her feelings about having a new baby. She might also feel that she is to blame for the poor evolution of mother-infant relations (15).

PPD is a difficult disorder to diagnose because it can be confused with maternity blues, especially if it appears a long time after childbirth. This problem is further aggravated by the fact that new mothers are reticent about seeking medical help because they do not wish

to disappoint those around them. They also may think that what they feel is normal and can be attributed to the behaviour of the baby or the fact that those closest to them do not provide sufficient support (16). This confirms the need for an early diagnosis of this disorder.

The Edinburgh Postnatal Depression Scale (EPDS) (Cox et al. 1987) was conceived to help primary health care professionals to diagnose postpartum depression. This scale has been used in more than 23 countries and was translated into Spanish by García-Esteve et al. (17). The EPDS is an effective instrument that has been validated in a wide range of countries for the identification of women at risk of suffering postpartum depression. EPDS scores can range from 0 to 30. The validation of the Spanish version of the Edinburgh Scale facilitates the diagnosis of PPD. The cut-off score of this version of the EPDS is 11 or higher. It has a sensitivity of 79%, a specificity of 95% and a positive predictive value of 63% (18). The objective of this study was to ascertain the risk of depression in new mothers who had recently given birth in public university hospitals in Granada and to identify pertinent risk factors.

METHOD

A descriptive study was made of a sample population of women who had given birth in the San Cecilio University Hospital and the Virgen de las Nieves University Hospital Granada (Spain) from January to May 2013. All of the subjects in our study were 18 years old or more, understood Spanish, and had given their informed consent to participate in the study. The sample population was intentional.

The data for our study was collected with the Edinburgh Postnatal Depression Scale (EPDS), adapted for Spanish women by García-Esteve et al (17). This scale consists of ten short questions regarding how the respondents have felt in the preceding week. Each question

has four possible answers with scores ranging from 0 to 3. The total score is the sum of all of the answers for the ten items. A score of 11 or higher indicates the probability of depression, but not its severity. Furthermore, in our research, the risk level of the pregnancy was measured with the four-level risk scale proposed in the Integrated Process of Pregnancy, Delivery, and Postpartum Period, a set of guidelines generated by the Health Department of the Regional Government of Andalusia. The subjects also answered a questionnaire that collected sociodemographic and obstetrical data as well as information concerning type of delivery.

Access to the subjects was facilitated by the hospitals participating in the study. After identifying the women who fulfilled the inclusion criteria, we explained the nature of the research. We then asked them if they would like to take part in it, and whether they would give their informed consent. Those women who agreed were provided with a copy of the Edinburgh Scale as well as the sociodemographic and obstetric questionnaire, which they were requested to fill out. When they had finished, they inserted the surveys in an envelope, which was afterwards collected by the head researcher.

The study protocol was approved and authorized by the Clinical Research Ethics Committee of the participating hospitals. Before the research was carried out, the subjects signed two documents. The first included a description of the objectives of the study as well as the methodology used. The second was a written informed consent, which stated that participation was anonymous and voluntary. It also included a section on the privacy and confidentiality of the data, according to Spanish Organic Law 15/1999 of 13 December on the Protection of Personal Data.

The data were analysed with SPSS 20.0, a statistics program for Windows. The descriptive analysis included mean values and standard deviations for the quantitative variables and frequencies and percentages for the qualitative variables. Subsequently, a

bivariate analysis was performed with the Student t-test, Pearson's correlation coefficient, and ANOVA. Values of $p < .05$ were regarded as statistically significant.

RESULTS

A total of 500 questionnaires were given to potential subjects. However, 28 women refused to participate; 32 did not understand Spanish; and 40 never returned the questionnaires. Valid questionnaires were those in which all of the items of the Edinburgh Scale had been answered. Of the participants who completed the questionnaires, 10 did not sign the informed consent. Consequently, the final sample population consisted of 370 women and the response rate was 74%. Of the 370 new mothers, 344 (93%) were native Spaniards and 26 (7%) were immigrants.

The values of the Edinburgh Scale ranged from a minimum of 0 to a maximum of 25. The mean value was 6.12 and the standard deviation was 4.928. In our study, 314 subjects (84.9%) obtained scores of 10 or lower whereas 56 (15.13%) obtained scores of 11 or higher. No statistically significant differences were found between native Spaniards and immigrants ($p < 0.415$) though the average value for immigrants was slightly higher (6.88) than the average value for Spaniards (6.07).

The minimum age of the women was 18 and the maximum was 46. Thus, the mean was 31.96 years and the standard deviation was 5.323. As for the education level of the participants, 47.8% had university studies; 22.4% had vocational training; 16.9% had secondary school studies; and 12.8% had a primary education. Regarding job status, over half of the subjects were employees, 23% were unemployed, 17.1% were housewives, and 7.8% were employers. Table 1 shows the results for the other sociodemographic variables.

DISCUSSION

The response rate for our study was somewhat higher than that of other research on postpartum depression. A possible explanation lies in the fact that the surveys were performed while the subjects were still in the hospital whereas in other studies, the envelopes were sent in by mail (19). Nevertheless, other authors obtained even higher percentages (96.4%), probably because the questionnaire was administered during the routine six-week postpartum check-up (20).

As previously mentioned, the mean age of the participants in our study was 31.93 years, which was similar to other studies in France (13) and Spain (19, 20). In contrast, Urdaneta et al. (21) analysed a sample population of new mothers in Maracaibo (Venezuela) with a mean age of 24.86.

The studies in which the Edinburgh Scale was applied to analyse the risk of postpartum depression used different cut-off scores. However, Matthey et al. (22) propose the use of validated cut-off scores so as not to obtain a clinically significant difference when interpreting types of postpartum depression. They also recommend that in studies in which the subjects are non-English speakers, the cut-off scores should be those used in research that took into account the culture and ethnic origin of the women (8). For this reason, we used a cut-off score of 10/11 as in García-Esteve et al. (17) despite the fact that this score was higher than the one in Cox et al. (1987), who first developed and validated the Edinburgh Scale. The cut-off score proposed by García-Esteve et al. permitted the identification of 100% of the women with a serious postpartum depression (17). A cut-off score of 10/11 was also used by other authors for a sample population of German women since it maximized the sensitivity and specificity of the screening (22). In France, another study (23) applied a cut-off score of >8.

The mean value of the EPDS scores in our study was 6.12. This result is similar to those of other studies: 5.84 (18); 6.4 (13); and 6.8 (24). All of these mean values are lower than the cut-off scores proposed by authors who had previously applied the Edinburgh Scale. Nevertheless, other researchers obtained an average value of 15.86 although the interval was 0-25, which was similar to ours (21). This difference in average scores can be explained because the first studies (13, 18, and 24) were performed in Spain and France whereas the latter study (21) was carried out in Venezuela where cultures and customs are different. This affected the risk factors implicated in the onset of postpartum depression.

In our study, the marital status of the subjects (single or in a stable relationship) was not found to be a statistically significant factor even though the mean value of the Edinburgh Scale was higher for single women. Since being single is regarded as a risk factor by certain researchers (25), it could be a contributing factor, which, along with other risk factors, ultimately leads to a postpartum depression.

Concerning the job situation of the subjects, being unemployed could intensify the depressive symptoms of the women since studies have found that there is an association between postpartum depression and unemployment (24) as well as the loss of employment during pregnancy (29). The results of our study did not show a statistically significant relation between this variable and PPD even though the mean EPDS score in our results was higher for housewives. It should be highlighted that other researchers maintain that these are risk factors for postpartum depression, above all if the women are full-time housewives and have other small children (21).

In regards to the aspects of pregnancy and delivery analysed in our study, we found that the increase in weeks of pregnancy significantly correlated with higher scores on the Edinburgh Scale. As for the actual childbirth, our results showed that differences between the onset of labour and the type of delivery were related to the EPDS score. More specifically, higher

scores were obtained in the case of caesareans, and especially elective caesareans. Similarly to our results, Urdaneta et al. (21) found that women who had had a caesarean section were three times more likely to suffer from postpartum depression.

According to the results of our study, approximately 11% of new mothers were given general anaesthesia. Their mean score on the Edinburgh Scale has a value similar to the cut-off point. This information, along with the results for the women who had caesareans, can indicate that both factors are mutually reinforcing, thus increasing the risk of PPD. Other actors obtained similar results, but in relation to epidural anaesthesia (19).

Although the weight of the new-born was not significant in regards to the EPDS score, there was a negative correlation. In other words, when the weight of the new-born was lower, the risk of depression was greater, and vice versa.

Concerning the hospital unit of the new-born, we obtained data that approached statistical significance. The mean EDPS score was highest when the babies were placed in the minimal care unit. In contrast, the score was lower when the babies were in the intensive or intermediate care units or when they remained with their mothers. These data could be explained because new mothers perceive that their children were well taken care of in special hospital units and when the babies remained with them. Other authors (26) found that a high percentage of women suffered from depression after having their children hospitalized in comparison with those that did not (27). They even found a significant positive correlation between postpartum depression and mothers who had difficulty establishing a positive affective bond with their children. However, the results of other studies did not find any correlation between PPD and neonatal complications (28).

In Spain, a woman's obstetric history includes the number of pregnancies, miscarriages, abortions, and childbirths. It also shows the number of live births and living

children. The results of our study indicate a significant positive correlation between the obstetric history and the risk of postpartum depression. (29, 30)

Our research study had certain limitations. More specifically, it was not possible to ascertain the risk of depression in immigrant women since they were only a small percentage of the new mothers in our sample population. Immigrant women have a fertility rate that is six times higher than that of native Spanish women. For this reason, some of them could have risk factors related to postpartum depressions that have been studied and confirmed by various researchers. These risk factors include recent stressful events, lack of social support, and low socioeconomic level.

Another limitation was the group of women who did not wish to participate and whose perceptions and experiences would doubtlessly have enriched our study. In future research, we plan to explore in greater depth the prevalence of postpartum depression in immigrant women. Still another fruitful line of research would be to study the risk factors that lead to postpartum depression with a view to contributing to its prevention by establishing early detection strategies and support to women who are most vulnerable to this disorder.

CONCLUSION

The majority of women in our sample were found to have EPDS scores lower than the cut-off threshold set by the researchers and thus were not at risk of PPD. The factors in our study that were most closely related to the risk of postpartum depression were the following: (i) onset of delivery; (ii) type of delivery; (iii) reasons for not having epidural anaesthesia; and (iv) parity. Those women with an EPDS score indicating a high risk of postpartum depression should receive a booklet with information describing depression symptoms that could appear

during the postpartum period. If the symptoms persisted, then they would be aware of the need to seek medical help.

REFERENCES

1. Susman JL. Postpartum depressive disorders. J Fam Pract 1996; **43:** 17–24.
2. O'Hara Michael W. Postpartum Depression: What We Know. J Clin Psychol 2009; 65: 1258–69.
3. Gómez M.S. Patología psiquiátrica en el puerperio. Psicosis Puerperal. Rev Neuropsiquiatr 2002; **65:** 32–46.
4. Pearlstein T, Howard M, Salisbury A, Zlotnick C. Postpartum depression. Am J of Obstet and Gynecol 2009; **200:** 357–64
5. Ladewig PW, London ML, Moberly SM, Olds SB. Enfermería maternal y del recién nacido. 5ª ed. Madrid: McGraw-Hill Interamericana; 2006.
6. Reck C, Stehle E, Reinig K, Mundt C. Maternity blues as a predictor of DSM-IV depression and anxiety disorders in the first three months postpartum. J Affect Disord. 2009; **113:** 77–87.
7. Alvarado-Esquivel C, Sifuentes-Álvarez A, Estrada-Martínez S, Salas-Martínez C, Ana Berthina Hernández-Alvarado A B, Ortiz-Rocha SG, García-López C R, Torres-Castorenad A, Sandoval-Herrerad F.Prevalence of postnatal depression in women attending public hospitals in Durango, Mexico] Gac Med Mex 2010; **146:** 1–9.
8. Gibson J, McKenzie-McHarg K, Shakespeare J, Price J, Gray R. A systematic review of studies validating the Edinburgh Postnatal Depression Scale in antepartum and postpartum women. Acta Psychiatr Scand 2009; **119:** 350–64.
9. Massoudi P. Hwang CP, Wickberg B. How well does the Edinburgh Postnatal Depression Scale identify depression and anxiety in fathers? A validation study in a population based Swedish sample. J Affect Disord 2013; **149:** 67–74.

10. Letourneau NL1, Dennis CL, Benzies K, Duffett-Leger L, Stewart M, Tryphonopoulos PD, Este D, Watson W. Postpartum Depression is a Family Affair: Addressing the Impact on Mothers, Fathers, and Children. Issues Ment Health Nurs 2012; **33:** 445–57.

11. Podesta L, Alarcón AM, Muñoz S, Legue CM, Bustos L, Barría PM. Psychomotor development in offspring of mothers with post partum depression. Revi Méd Chil 2013; **141:** 464–70.

12. Poobalan AS, Aucott IS, Ross L, Cairns. S. Smith W, Helms PJ, Williams JH. Effects of treating postnatal depression on mother–infant interaction and child development. Systematic review. Br J Psychiatry 2007; **191:** 378–86.

13. Teissedre F, Chabrol H. A study of the Edinburgh Postnatal Depression Scale (EPDS) on 859 mothers: detection of mothers at risk for postpartum depression. Encephale 2004; **30:** 376–81.

14. Bezares B, Sanz O, Jiménez I. Puerperal pathology. An Sist Sanit Navar 2009; 32 Suppl 1: 169–75.

15. J L Cox, J M Holden, R Sagovsky. Detection of postnatal depression. Development of the 10-item Edinburgh Postnatal Depression Scale. Br J Psychiatry 1987; **150:** 782–6.

16. Jadresic E, Nguyen DN, Halbreich U. What does Chilean research tell us about postpartum depression (PPD)? J Affect Disord 2007; **102:** 237–43.

17. Garcia-Esteve L, Ascaso C, Ojuel J, Navarro P. Validation of the Edinburgh Postnatal Depression Scale (EPDS) in Spanish mothers J Affect Disord 2003; **75:** 71–6.

18. Ascaso Terrén C, Garcia Esteve L, Navarro P, Aguado J, Ojuel J, Tarragona MJ. Prevalence of postpartum depression in Spanish mothers: comparison of estimation by

mean of the structured clinical interview for DSM-IV with the Edinburgh Postnatal Depression Scale. Med Clín (Barc) 2003: 15; **120:** 326–9.

19. Sierra Manzano JM. Review: antenatal screening tools to predict postnatal depression generally have low specificity and sensitivity. Evid Based Ment Health 2003; **6:** 77.
20. Navarro P, Ascaso C, Garcia-Esteve L, Aguado J, Torres A, Martıín-Santos R., Postnatal psychiatric morbidity: a validation study of the GHQ-12 and the EPDS as screening tools. General Hospital. Psychiatry 2007; **29:** 1–7.
21. Urdaneta M J, Rivera S A, García I J, Guerra V M, Baabel Z N, Contreras B A. Prevalence of postpartum depression in nulliparous and multiparous women evaluated by Edinburgh postnatal depression scale. Rev Chil Obstet Ginecol 2011; 76: 102–12
22. Matthey S, Henshaw C, Elliott S, Barnett B. Variability in use of cut-off scores and formats on the Edinburgh Postnatal Depression Scale: implications for clinical and research practice. Archi Womens Ment Health 2006; **9:** 309–15.
23. Klier CM, Rosenblum KL, Zeller M, Steinhardt K, Bergemann N, Muzik M. A multirisk approach to predicting chronicity of postpartum depression symptoms. Depress Anxiety 2008; **25:** 718–24.
24. Jardri R, Pelta J, Maron M, Thomas P, Delion P, Codaccioni X, Goudemand M. Predictive validation study of the Edinburgh Postnatal Depression Scale in the first week after delivery and risk analysis for postnatal depression. J Affect Disord 2006; **93:** 169–76.
25. Stewart DE, Robertson E, Dennis CL, Grace S. An evidence-based approach to post-partum depression. World Psychiatry 2004; **3:** 97–8.
26. Arranz L, Ruiz J, Aguirre W, Carsi E, Ochoa G, Camacho M. Modelo de intervención temprana en la depresión postparto en un hospital de tercer nivel. Rev Esp Med Quir 2012; **17:** 100–8.

27. Evans M. Gregorio, Vicuña M. Mcjohn, Marín Rodrigo. Depresion postparto realidad en el sistema publico de atencion de salud. Rev Chil Obstet Ginecol 2003; **68:** 491–4.

28. Póo F AM, Espejo SC, Godoy PC, Gualda de la CM, Hernández OT, Pérez HC. Prevalence and risk factors associated with postpartum depression in puerperal women consulting in primary care. Rev Méd Chil 2008; **136:** 44–52.

29. Urdaneta M J, Rivera S A, García I J, Guerra V M, Baabel Z N, Contreras B A. Prevalencia de depresión posparto en primigestas y multíparas valoradas por la Escala de Edimburgo. Rev Chil Obstet Ginecol 2010; **75:** 312–20.

30. Moreno Zaconeta A, Domingues Casulari da Motta L, Sergio França P. Depresión postparto: prevalencia de test de rastreo positivo en puérperas del hospital universitario de brasilia, brasil. Rev Chil Obstet Ginecol 2004; **69:** 209–13.

Table 1: Description of the clinical variables of the sample

	Total
Weeks of pregnancy	39.43 (1.842) [27-42]
Level of pregnancy risk:	
Low risk	253 (69.5%)
Medium risk	59 (16.2)
High risk	38 (10.4)
Very high risk	14 (3.8)
Nº of pregnancies	0.89 (1.066) [0-6]
Nº of miscarriages and abortions	0.27 (0.599) [0-4]
Nº of childbirths	0.63 (0.780) [0-6]
Nº of live births	0.63 (0.780) [0-6]
Nº of living children	0.62 (0.770) [0-6]
Onset of labour:	
Spontaneous	249 (68.6%)
Induced	78 (21.5)
Elective caesarean	36 (9.9)
Delivery:	
Spontaneous	209 (57.4%)
Instrumental	46 (12.6)
Caesarean	109 (29.9)
Epidural anaesthesia:	279 (75.4%)
Reasons for not having epidural anaesthesia:	
Lack of time	36 (56.3%)
Personal choice	21 (32.8)
General anaesthesia	7 (10.9)
Hospital unit of new-born:	
With the mother	265 (72.8%)
Minimum care unit	81 (22.3)
Intermediate or intensive care unit	18 (4.9)
Reasons for placement in hospital unit:	
Caesarean	57 (60)
Premature birth	21 (22.1)

Other	17 (17.9)
Weight of new-born	3.20 (0.562) [1.10-5.00]
Sex of new-born:	
Female	172 (47.4)
Male	191 (52.6)
Women who received maternity education	193 (52.2)
Satisfaction with maternity education	4.20 (0.842)
	1.78 average (0.823), where 1 is the maximum

Table 2: Mean values and ratio between sociodemographic variables and Edinburgh Scale scores

	Edinburgh	P
Age	r=0.048	0. 357***
Education level:		
University	6.05 (4.919DT)	0.395**
Vocational training	5.84 (4.757)	
Secondary school	5.66 (3.580)	
Elementary school	7.17 (6.350)	
Marital status:		
Single	8.05 (7.280)	0.071***
Married/stable relationship	6.00 (4.760)	
Job status		
Employer	6.25 (4.265)	0.061**
Employee	5.61 (4.970)	
Unemployed	6.04 (5.007)	
Housewife	7.57 (4.825)	

***Pearson correlation, ** ANOVA * Student's *t*

Table 3: Mean values and correlation between obstetric variables and Edinburgh Scale score

	Edinburgh	P
Received maternity education:		
Yes	5.83 (4.601)	0.229*
No	6.45 (5.256)	
Level of pregnancy risk		
Low risk	5.80 (4.647)	0.151**
Medium risk	6.42 (5.123)	
High risk	7.68 (6.005)	
Very high risk	6.71 (5.511)	
Weeks of pregnancy	r=0.112	**0.031*** **
Onset of labour:		
Spontaneous	5.67 (4.460)	**0.000** **
Induced	5.99 (4.892)	
Elective caesarean	9.36 (6.749)	
Delivery:		
Spontaneous	5.89 (4.723)	0.029**
Instrumental	4.96 (4.269)	
Caesarean	7.07 (5.453)	
Epidural anaesthesia:		
Yes	6.33 (4.883)	0.155*
No	5.46 (5.079)	
Reasons for no epidural anaesthesia:		
Lack of time	4.75 (3.767)	
Personal choice	6.52 (6.080)	**0.038** **
General anaesthesia	10.14 (7.841)	
Weight of new-born:	r= -0.034	0.520***
Hospital unit of new-born		
With the mother	5.78 (4.772)	**0.059** **
Minimum care unit	7.26 (5.347)	
Intermediate or intensive care unit	5.72 (4.836)	
Reason for placement in hospital unit:		
Caesarean	8.11 (6.215)	0.089 ****

Premature birth	4.90 (4.847)	0.061**
Other	6.12 (3.080)	
Nº of miscarriages and abortions	r=0.127	**0.017*** **
Nº of pregnancies	r=0.154	**0.003*** **
Nº of childbirths	r=0.128	**0.015*** **
Nº of live childbirths	r=0.128	**0.015*** **
Nº of living children	r=0.119	**0.024*** **

*Student's *t*

** ANOVA

***Pearson correlation

****Kruskal-Wallis