Sociocultural factors associated with the development of postnatal anxiety symptoms

Abstract

Background Postnatal anxiety is relatively common when transitioning to parenthood; however, there are relatively few studies assessing postnatal anxiety in Middle Eastern women.

Aim To identify the prevalence of postnatal anxiety among Jordanian women and associated sociocultural factors.

Method A descriptive cross-sectional design was used with 324 women. Participants completed the Depression, Anxiety, and Stress Scale (DASS) and Maternity Social Support Scale at 6-8 weeks postpartum in addition to a sociodemographic data form.

Findings Some 45.4% of women scored above 'mild' on the DASS scale. Postnatal anxiety was significantly associated with low levels of support, giving birth to a female baby, financial difficulties, and having four or more children. Findings revealed a high level of postnatal anxiety among Jordanian women.

Conclusion There is a need for routine assessment, ongoing support, counselling and emotional care, which are important to enhance maternal satisfaction and psychological wellbeing.

Keywords

Postnatal | Anxiety | Social support | Sociocultural factors | Jordan

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Childbirth and the postpartum period expose women to various social, biological and psychological changes. Although these changes may lead to individual growth and fulfilment, some women may also be vulnerable to mental distress associated with depression and anxiety (Mohammad et al, 2011). Postnatal anxiety is a relatively common phenomenon when transitioning to motherhood (Zeidner and Matthews, 2010). Worldwide, the prevalence of postnatal anxiety is estimated at 3–43%, with relatively little difference in rates between developed and developing countries (Falah-Hassani et al, 2016; Dennis et al, 2017a; Field, 2018).

Factors that give rise to postnatal anxiety are not clear, but a multi-factorial aetiology is commonly accepted (Anniverno et al, 2013). The development of postnatal anxiety has been associated with perinatal, interpersonal and sociocultural factors. Perinatal stressors include mode of birth, admission to the neonatal intensive care unit (NICU), previous experience of childbirth and prenatal loss (Michels et al, 2013; Desmarais et al, 2014; Shlomi Polachek et al, 2014; Falah-Hassani et al, 2016). Interpersonal and relationship stressors include marital dissatisfaction, intimate partner violence, low social support, and lack of child care support (Shrestha et al, 2014; Falah-Hassani et al, 2016; Field; 2018). Sociocultural factors include the relationship with the mother-in-law and sex of the baby, which may play an important role for many Asian and Middle Eastern women (Bener et al, 2012; Anniverno et al, 2013; Shrestha et al, 2014). A previous maternal or family history of psychiatric illness, financial difficulty, and having an unplanned pregnancy (Bener et al, 2012; Anniverno et al, 2013; Shrestha et al, 2014; Field, 2018) may also be associated with the development of postnatal anxiety.

Postnatal anxiety has received very little attention in Arab and Middle Eastern countries. One study conducted on postnatal anxiety with 2091 women in Qatar reported a prevalence of 13.1% (Bener et al, 2012).

In Jordan, there is little acknowledgment of women's emotional distress by healthcare providers and society (Mohammad et al, 2011). Childbearing women may also

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be constrained by a range of cultural and social norms that make it unacceptable for them to express negative feelings associated with pregnancy and childbirth (Hanlon et al, 2009). Although a previous study in Jordan has reported that sociocultural factors have a significant effect on the development of postnatal depression (Mohammad et al, 2011), there has been no research on the effect of such factors on postnatal anxiety. The impact of giving birth to a female baby and inadequate postnatal support may contribute to poor emotional wellbeing experienced by Jordanian women during pregnancy and after childbirth, and this research may therefore inform the development of strategies for the early detection of women at risk of postnatal anxiety. Moreover, determining the prevalence of postnatal anxiety in Jordanian women may help in the development of appropriate strategies and interventions to prevent and decrease the adverse effects of anxiety on mothers, their infants and families.

Study aim

The aim of this research was to identify the prevalence of postnatal anxiety among Jordanian women and the factors associated with development of postnatal anxiety.

Method

Design

A descriptive cross-sectional design was used.

Participants

Women recruited to the study were 6–8 weeks postpartum, able to speak and read Arabic, and aged between 18 and 45 years old. Women whose babies had died were excluded from the study.

Setting

Recruitment took place in maternal and child health care clinics in four health care centres in Maan, southern Jordan. General healthcare services are offered in the health centres for all family members.

Measures

Sociodemographic data form

The form consisted of 9 items seeking information about selected demographic and sociocultural variables including age, level of education, parity, total monthly income, employment status, and mode of birth. The questionnaire also sought participants' history of psychiatric illness, sex of the baby, and any stressful life events during the pregnancy and in the previous year, such as financial difficulties, changes to the marital relationship (such as divorce), changes to place of living, death of a close family member, any increase in responsibilities, and infertility.

Anxiety sub-scale of the Depression, Anxiety and Stress Scale (DASS-anxiety)

The DASS-anxiety sub-scale consists of seven items. Scores are calculated by adding the responses for the items (Lovibond and Lovibond, 1995). Participants were asked to rate the degree to which each symptom was experienced over the last week on a four-point Likert scale from 0 ('did not apply') to 3 ('applied to me very much', or 'much of the time').

Symptom severity scores for anxiety are calculated and classified with cut-off points for 'normal' (0-7), 'mild' (8-9), 'moderate' (10-14), 'severe' (15–19) and 'extremely severe' anxiety (≥20) (Lovibond and Lovibond, 1995). A previous study conducted in Jordan found the translated version of the DASS-anxiety to be valid and internally consistent, with a Cronbach's alpha (α) of 0.79 (Mohammad et al, 2011). In this study, the validity of the DASS-anxiety sub-scale was α=0.86.

Maternity Social Support Scale (MSSS)

This six-item, self-report scale asks participants to rate the extent and sources of social support on a five-point Likert scale. The total possible score for the scale is 30, with scores categorised as 'low' (6-18), 'medium' (19-24) and 'adequate' support (>24) (Webster et al, 2000). It has been translated into Arabic and used in a study of antenatal and postnatal depression among Jordanian women with a reliability coefficient for internal consistency of α=0.90 (Mohammad et al, 2011). In this study, the validity of MSSS was α=0.83.

Data collection

In Jordan, women regularly attend maternal and child health clinics to receive postnatal care for themselves or their babies. Midwives and nurses in each clinic identified women who met the inclusion criteria and asked if they were interested in speaking to the researcher. Interviews were conducted when participating women were 6–8 weeks postpartum, which provided them with an opportunity to reflect on their experiences (Rudman et al, 2007). The women were approached by the researcher and given verbal and written information about the nature of the study. Immediately after obtaining written consent, participants were interviewed by the researcher to complete the forms. The interview took approximately 20 minutes. The interview was conducted in a private clinic room to provide as much privacy as possible and participants were interviewed without their husbands to enable them to feel comfortable to talk about issues and to ask any questions. The interviews took place immediately before or after consultation with clinic staff. Data collection took place between October 2015 and January 2016.

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Table 1. Sociodemographic characteristics of participants

Demographic characteristics	*n*	%
Age (years)		
<20	6	1.9
20–29	135	41.7
30–39	163	50.3
≥40	20	6.2
Education		
High school or less	87	26.9
Diploma	83	25.6
Bachelor's degree	117	36.1
Postgraduate degree	37	11.4
Employment status		
Employed	200	61.7
Unemployed	124	38.3
Parity		
1 child	74	22.8
2 children	58	17.9
3 children	102	31.5
4 children or more	90	27.8
Mode of birth		
Normal vaginal birth	237	73.1
Caesarean birth	87	26.9

Table 2. Correlations between DASS-anxiety scores and risk variables

Variables	DASS-anxiety
MSSS	-0.615**
Sex of baby	0.206**
Financial problems	-0.264**
No of children	0.136**
Monthly income	-0.005
Employment	0.052-
Mode of birth	0.063

** Correlation is significant at *P*>0.01 (2-tailed). DASS-anxiety: Anxiety sub-scale of the Depression, Anxiety and Stress Scale; MSSS: Maternity Social Support Scale

Statistical analysis

Data were analysed using SPSS version 22. Data were cleaned and reviewed for completeness and consistency within single data forms and between data forms. Frequencies, mean, and standard deviations were calculated as appropriate on the demographic variables and scale scores. Psychometric properties of the DASS-anxiety and MSSS were assessed using Cronbach's α for reliability. To determine the prevalence of postnatal anxiety among Jordanian women, total scores on the DASS-anxiety sub-scale were calculated. A score of >9 was used as the best estimation for the prevalence of postnatal anxiety symptoms (Lovibond and Lovibond, 1995). To determine the relationship between study variables and DASS-anxiety scores, a multiple regression analysis was undertaken. An α level of 0.05 was used for all statistical tests.

Results

Sociodemographic characteristics

A total of 400 women were approached to participate in the study. Of these women, 324 were recruited (response rate of 81%). Characteristics of participants are presented in *Table 1*. Half of the participants (50.3%) gave birth to a female baby. Most women (*n*=307; 94.8%) reported no history of psychiatric illness.

Postnatal anxiety symptoms

At 6-8 weeks postpartum, the DASS-anxiety mean score for this sample was 9.04 (SD=5.54; range=0–21). Overall, 147 women (45.4%) had anxiety scores >9 (above mild postnatal anxiety). Of these, 84 (25.9%) had scores between 10–14 (moderate); 53 women (16.4%) had scores between 15–19 (probable severe); and 10 women (3.1%) had scores ≥20 (extremely severe).

Maternal postnatal social support

The mean MSSS mean score for this sample was 18.25 (SD=4.68; range=8–27). A total of 141 women (43.5%) had low support scores (6–18), 127 (39.2%) had medium support (19–24), and only 56 participants (17.3) reported having adequate support.

Risk factors associated with postnatal anxiety

Based on correlations between DASS-anxiety scores and independent variables, low social support as measured by MSSS was associated with higher likelihood of probable postnatal anxiety (r=-0.651; *P*<0.05), as was giving birth to female baby (r=0.21; *P*<0.05), financial difficulties (r=-0.26; *P*<0.05), and multiparity (having four children or more) (r=0.14; *P*<0.05). Monthly income, employment, and mode of birth were not significantly correlated with DASS-anxiety scores. Results of these analyses are shown in *Table 2*.

Predictors of postnatal anxiety symptoms

A multiple regression analysis was performed to determine predictors of postnatal anxiety symptoms. Variables included social support, sex of the baby,

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Table 3. Variables associated with development of postnatal anxiety symptoms

	Unstandardised coefficients		Standardised coefficients			95% confidence interval for B	
Variable	B	Std error	β	t	Sig	Lower	Upper
Constant	15.885	1.851		8.582	<0.001*	12.243	19.527
MSSS score	-0.481	0.038	-0.571	-12.760	<0.001*	-0.555	-0.407
Sex of baby	1.445	0.464	0.135	3.113	0.002*	0.532	2.358
Financial difficulty	-1.087	0.480	-0.101	-2.264	0.024*	-2.031	-0.142
No of children	0.519	0.209	0.107	2.483	0.014*	0.108	0.931
Monthly income	0.039	0.373	0.005	0.105	0.917	-0.695	0.773
Employment	-0.565	0.509	-0.052	-1.110	0.268	-1.568	0.437
Mode of birth	-0.222	0.524	-0.018	-0.424	0.672	-1.254	0.810

*Significant at $P<0.001$. DASS-anxiety: Anxiety sub-scale of the Depression, Anxiety and Stress Scale; MSSS: Maternity Social Support Scale

multiparity, financial problems, monthly income, employment and mode of birth. Preliminary analyses were carried out to check for violations of normality and for multicollinearity. The total variance explained by the model was 42.2% ($F(7, 323)=32.96$; $P<0.001$). Low social support made the strongest unique contribution (beta (β)=0.57), followed by giving birth to female baby (β=0.14), having four children or more (β=0.11), and having financial difficulties (β=0.10). The other three variables (monthly income, employment, and mode of birth) were not statistically significant variables in the model. Results of these analyses are shown in *Table 3*.

Discussion

Postnatal anxiety has negative consequences for mothers and their infants. The findings of this study showed that 45.4% of women showed symptoms of postnatal anxiety. The prevalence of postnatal anxiety in this study is higher than that reported in developed countries, where rates range from 3–40.4% (Martini et al, 2015; Dennis et al, 2016; Dennis et al, 2017b; Field, 2018). In Canada, the prevalence of postnatal anxiety symptoms among women who were 1, 4, and 8 weeks postpartum was 22.6%, 17.2%, and 14.8%, respectively (Dennis et al, 2016). In Australia, only 13% of 4366 women had high anxiety scores at 6 months postpartum (Yelland et al, 2010).

However, the prevalence of postnatal anxiety reported in this study was also higher than postnatal anxiety levels in developing countries, which ranged from 2.7–37.4% (Ali et al, 2013; Shrestha et al, 2014; Osman et al, 2015). Furthermore, the prevalence of postnatal anxiety in this study was also higher than the prevalence reported in another Arab country, Qatar, where the prevalence of postnatal anxiety was reported to be 13.1% for women who were less than 6 months postpartum (Bener et al, 2012). These inconsistent results might be related to differences in care settings, support practices, cultural contexts, assessment periods, time of data collection, instruments used, and the cut-off scores applied to the scales (Bener et al, 2012; Shlomi Polachek et al, 2014; Field, 2018). This study's findings were similar to those of Shlomi Polachek et al (2014), who found that the prevalence of postnatal anxiety was 40.4% in Israeli women at 1 month postpartum; however, this similarity should be viewed with caution, as during the early postpartum period, the majority of women experience transient mood disturbance, and therefore screening during that period may give inflated results.

Adequate social support during pregnancy and the postpartum period has been found to reduce maternal anxiety and enhance psychological wellbeing (Bajurna et al, 2014; Shrestha et al, 2014; Falah-Hassani et al, 2016; Dennis et al, 2017a). In this study, women with poor postpartum support were more likely to develop postnatal anxiety. This finding was also supported by Bener et al (2012), who found that lack of family support had a significant association with development of postnatal anxiety. The presence of female friends or relatives during the postpartum period is considered important in meeting women's needs, and providing help with newborn care (Shrestha et al, 2014). Some women in Jordan may feel isolated because of the low level of support that they receive from their families; and their husbands in particular. Midwives and maternal

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health nurses have an important role to play in assessing women's social support and signposting to groups to increase peer support and expand their social networks.

Many studies confirm that culturally-based gender preferences have significant impact on the development of postnatal anxiety (Agrati et al, 2015; Shrestha et al, 2014). This study found that women who gave birth to a female baby had higher levels of postnatal anxiety than women who gave birth to a male baby. This may be because in Arab cultures male children are seen to provide economic support for their families and carry the family name (Mohammad et al, 2014; Shrestha et al, 2014). Cultural changes in Jordan have been slow, but midwives could endeavour to respond positively if the sex is known before birth, and encourage both parents' acceptance towards their new daughter.

Multiparity (having 4 children or more) was associated with high levels of anxiety among Jordanian women in this study. This was congruent with other studies that found that multiparity—especially five children or more—was associated with the development of postnatal anxiety and psychological distress (Reichenheim et al, 2014; Dennis et al, 2016; Field, 2018). Having a large family increases the workload on mothers in regards to child-rearing, household duties, and financial concerns (Reichenheim et al, 2014; Dennis et al, 2016). The findings in this study are congruent with other studies, which have confirmed that low income or financial problems precipitated the risk of postnatal anxiety (Anniverno et al, 2013; Shrestha et al, 2014).

Most participants in this study reported no history of psychiatric illness. This result may be influenced by women's feelings of stigma, shame and fear and therefore needs to be considered with caution. Mothers in Jordan are likely to prefer to keep these negative emotions and feelings private and not discuss these feelings in a healthcare context, in the community or with friends (Mohammad et al, 2011). Mamisachvili et al (2013) found that stigma associated with mental illness often prevented women from seeking help, which may delay detection and management of the problem. Similarly, Almazeedi and Alsuwaidan (2014) reported that mental illness was associated with stigma in the Middle Eastern country of Kuwait. These negative cultural views need to be addressed through community awareness campaigns so that it is socially acceptable for vulnerable women to visit a mental health practitioner or receive psychiatric care or treatment in the perinatal period.

Limitations

Generalisation of the study findings beyond this sample is limited due to the use of convenience sampling. This is mitigated to some extent by the large sample size and inclusive criteria for participation; however, the study did not assess women during the antenatal period to determine risk of anxiety, nor were women recruited from private hospitals. Although the use of a well-known, translated instrument to determine anxiety levels allowed for comparison with studies conducted in western cultures, the cultural context needs to be considered when interpreting results.

Implications for midwifery practice

The high prevalence of postnatal anxiety reported in this study is of concern. The results highlight the need for high-quality psychological and psychosocial assessment during pregnancy and the postnatal period, to help identify women at risk of postnatal anxiety. Developing appropriate strategies and preventative measures are important. This could include educating healthcare providers about the importance of evidence-based practice when providing care during pregnancy, childbirth and the postpartum period, to enhance women's experiences and psychological wellbeing. Educating women about the importance of support during labour and the postnatal period is also essential.

Conclusion

This is one of the few studies to investigate the prevalence of and factors associated with the development of postnatal anxiety among Jordanian women. The prevalence of 45.4% of Jordanian women with probable postnatal anxiety is of concern and warrants immediate attention by maternity services and government. Factors associated with postnatal anxiety were low postnatal support, giving birth to a female baby, financial problems, and having four children or more. BJM

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