

# The Relationship between Postpartum Depression and Postpartum Support : Expatriate and Non-Expatriate Comparisons

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## ABSTRACT

Poor social support is a known risk factor in the development of postpartum depression. Expatriate women may be at increased risk of experiencing lower levels of social support due to cultural and language barriers. Currently, research examining postpartum depression and levels of social support in expatriate women is sparse. The aim of this preliminary study was therefore to determine whether postpartum support is a predictor of postpartum depression in expatriate women. Sixty-five women based in the United Kingdom took part in an online cross-sectional survey consisting of a series of questionnaires gathering demographic information and measuring postpartum depression and postpartum social support. Of the total sample, 42 were expatriate and 23 were non-expatriate women, with a mean age of 33 years. Higher levels of depression were reported by the expatriate group. A significant negative correlation was identified between postpartum depression and postpartum support; perceived lack of social support was a significant predictor of postpartum depression. Levels of perceived emotional, material, informational and comparison support were reportedly lower in expatriate women compared to non-expatriate women. This study offers an early understanding of the potential risk factors associated with postpartum depression in expatriate women. Future studies are encouraged to develop interventions that aim to increase social support for expatriate women.

Keywords: Depression, Postpartum, Social support, Expatriate, Women, Mothers

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## I. INTRODUCTION

Postpartum depression (PPD) is a depressive disorder with onset during pregnancy or up to four weeks postpartum [1] that may last for up to one year [2]. Symptoms of PPD include feeling anxious, trouble sleeping, eating difficulties, anhedonia, feelings of guilt and problems with self-care and attending to the

baby's needs [1]. Approximately 10 percent of all women will experience PPD, [1] with estimates in Western Countries ranging between 13% and 19% [2]. In a review that included 143 studies from 40 countries, incidence of PPD ranged between 0.5% and 60% [3].

PPD is a serious mental health concern [4] that can impact mother-child attachment. One risk factor is the mother's mental health status prior to pregnancy. Research has also investigated the impact of maternal-foetal bonding on the child's maternal attachment [5]. Whilst the existence of depression prior to pregnancy is the greatest risk factor for PPD, approximately 40% of mothers will experience their first episode of depression post-birth [6]. Previous research has differentiated the maternal bonding patterns of women with PPD and those with antenatal depression and PPD [7-8]. Moreover, PPD has been shown to impact the child's short- and long-term development owing to compromised infant-mother bonding [9]. Arguably, women with PPD may be less likely to initiate or maintain breastfeeding, which can result in early cessation of breastfeeding [9]. In one study with over 600 infants of mothers with PPD, higher levels of stress, heightened levels of arousal, and poorer regulation were reported among the infants [10].

Other factors related to PPD include access to social support; primarily, the perception of the quality and quantity of the support available provided [11]. When examining groups that might be more susceptible to social isolation, such as migrants, a higher prevalence of PPD is observed [12]. In fact, approximately one fifth of migrant women experience PPD, which is far greater than the general population [1]. Additional reported risk factors for migrants include problems with marital adjustment, language, financial constraints, [13] and barriers to accessing health and social care services [14].

Furthermore, moving overseas has been associated with psychological issues such as depression, particularly among expatriates who are living abroad [15]. The impact of international relocation on adjustability has been found to be likely more severe for the non-working spouse [16]. The working spouse has a working routine that includes a supportive

social network, whereas the non-working spouse may be more likely to need to create their own social network and experience feelings of isolation that can impact wellbeing [17]. Moreover, it has been documented that where both spouses are working, the female spouse tends to experience more work-personal conflict than the male spouse [18]. In an English study, the predominant stressors among expatriate couples included not having friends to confide in, financial concerns, depression, family conflicts, and spending insufficient quality time together [19]. Indeed, relationship difficulties seem to be a major stressor among expatriate couples that might result in divorce. Pregnancy can also impact adjustment [20].

Whilst previous studies have examined PPD and social support among immigrants, refugees, and asylum seekers [21-23], few studies have considered how these factors might feature among expatriate women. Therefore, the present study aimed to explore the relationship between PPD and social support in expatriate and non-expatriate women. It was hypothesised that (a) levels of PPD would be higher among expatriate mothers, (b) perceived social support would be a predictor of PPD among expatriates and non-expatriate mothers, and (c) perceived social support would be lower among expatriate mothers. By carrying out this study, it was anticipated that a greater appreciation of the role that social support plays for this group of women could be achieved.

## II. METHODS

A cross-sectional survey design was employed to collect data for this study. A snowballing sampling method using social media was used to recruit participants. The survey link was posted on social media pages including Reddit, Facebook and LinkedIn.

The inclusion criteria included expatriate women (defined as those who were British born and had lived outside the UK for at least 18 months and had moved back into the UK within the previous 18 months) with prior PPD. Participants were 18+ years, with an infant of up to 12 months. The comparison group consisted of a group of non-expatriate women with PPD, aged 18+ years, British, and with an infant of up to 12 months.

The demographic information gathered included age, the number of children, marital/partner status, Countries resided and returned from.

The sample consisted of 42 expatriates and 23 non-expatriates. The overall mean age of the participants was 33 years (SD 4.25).

The PHQ-2 [24] was used to examine levels of depressed mood and anhedonia over the past two weeks. This is a 2-item questionnaire and consists of response options 0 (not at all) to 3 (nearly every day). Scores range from 0 to 6. Scores above 3 suggest that major depression is likely. The Cronbach alpha ranges between 0.77 to 0.85. This measure was used to screen-out for depressed mood.

The EPDS [25] was employed for assessing postpartum depression. This is a 10-item, self-report instrument. Items are scored 0-3 to produce a summative score ranging from 0 to 30 with higher scores indicative of postpartum depression. The Cronbach Alpha ranges between 0.82 to 0.88.

The PSQ [26] measures perceived social support. This is a 34-item instrument with four Likert-type scales measuring material support (9 items), emotional support (10 items), informational support (10 items), and comparison support (5 items). The PSQ has high internal consistency with Cronbach's Alpha coefficients for subscales ranging from 0.62-0.94.

Following ethical approval from the University Psychology Research Ethics Committee, and in accordance with the BPS Ethics Guidelines for Internet Mediated Research [27]. The survey took approximately 20 minutes to complete. Participants were ensured anonymity and confidentiality with respect to their responses. Data were stored on a password-protected computer and in accordance with UK General Data Protection Regulation (GDPR) and the UK Data Protection Act (2018).

To establish an understanding of the relationship between postpartum depression (PPD) and postpartum support (PPS) among expatriates (E) and non-expatriates (NE), Pearson's correlation coefficients and a linear regression were carried out to identify predictors of PPD. This study also explored differences in the types of social support and levels of PPD among expatriate and non-expatriate mothers. Following assumption testing, non-parametric tests including Chi Square test of independence were performed on the data to compare levels of PPD and PPS among expatriate and non-expatriate groups. SPSS 26 was used to carry out the statistical analysis.

### III.RESULTS AND DISCUSSION

There was a negative correlation between PPD and PPS,  $r(64) = -.745$ ,  $p < .001$ , accounting for 75% variance. A linear regression analysis indicated that the Durbin-Watson was .995, which is suggestive that adjacent variables were not correlated. The regression equation produced a moderate to high fit with the data explaining 68% of the variance ( $R^2 = .675$ ). The overall model was also significant ( $F(11, 54) = 12.368$ ,  $p < .001$ ). PPS ( $\beta = -.678$ ,  $p = .031$ ) was found to be a significant and moderate to high predictor of PPD.

The sample in this study was relatively small, therefore, owing to violations of assumption testing (homogeneity of variance,  $p < .05$  and Shapiro Wilk,  $p < .05$ ), a series of crosstabs (Chi square tests of

independence) were conducted. Chi square testing revealed a significant difference in PPD between English expatriates and English non-expatriates,  $\chi^2 (2, N = 61) = 18.18, p = .008$ . Higher levels of material support were reported in non-expatriate than expatriate groups  $\chi^2 (1, N=62) = 24.062, p=.009$ ; for emotional support  $\chi^2 (1, N=62) = 22.051, p=.005$ ; for informational support  $\chi^2 (1, N=62) = 19.072, p=.011$ , and for comparison support  $\chi^2 (1, N=62) = 22.092, p=.001$ .

Overall, this study examined whether perceived social support is a predictor of postpartum depression among expatriates and non-expatriate mothers. Further, it compared levels of postpartum depression and perceived social support between expatriates and non-expatriates. Postpartum depression was reported in both expatriate and non-expatriate groups. However, levels of depression were higher in the expatriate than non-expatriate group. Furthermore, lower levels of perceived social support were associated with postpartum depression in this study. These outcomes reflect those reported in other countries, including Turkey, Korea, Germany, and Thailand [28].

In line with previous work [29], the current study also found significant differences between the importance of the support provided and the level of support received. Arguably, differentiating between socio-emotional support and instrumental support is more accurate in predicting the level of postpartum depression than looking at levels of (undifferentiated) social support [30]. In support of this, socio-emotional support has been positively associated with the transition into motherhood and a significant reduction in postpartum depression [11]. Socio-emotional support generates feelings of inclusion through companionship or friendship. Instrumental support minimises stress by getting additional support such as helping with childcare responsibilities [31]. Instrumental support is community-based support that can increase emotional connectedness such as

friendships thus further supporting adjustment. Both types of support are important in minimising PPD [32]. Finally, expatriate women may be faced with unique barriers in finding comparison support, due to language and cultural differences, and a lack of accessible support services such as pre- and post-natal groups.

The results of this study must be evaluated in light of some further considerations. For example, the study did not include marital satisfaction/discord as a predictor of PPD. This would have made for an additional interesting comparison between the expatriate and non-expatriate groups in this study, given that a meta-analysis of 84 studies has confirmed a moderate predictive relationship between relationship dissatisfaction and postpartum depression [33]. Furthermore, the results of this study might not be applicable to expatriates outside the UK, as outcomes yielded from a small and unevenly distributed sample cannot be considered generalizable to the wider expatriate population. Finally, utilising an online survey that is confined to social media users may further limit the generalizability of these results.

Future research might include other adjustment factors along with social support. There is some evidence that work-focused factors can impact expatriate wellbeing [34]. Future studies might also consider the practical implications of the current findings for expatriate women who are living away from their extended family and friends. This could include exploring the role of healthcare professionals in identifying sources of support, and the effectiveness of individual, relationship or group counselling, for these groups. Online forums may also be an effective peer support intervention for expatriate mothers who are geographically isolated to connect.

#### IV. CONCLUSION

This preliminary study suggests that expatriate women are at higher risk of postpartum depression, related to inadequate social support. These findings point toward the importance of integrating strong social support initiatives into healthcare services for expatriate women. Postpartum depression is a serious public health problem; its prevention is critical due to the potential adverse effects that it can have on the whole family. There is a shortage of available research on access, acceptability and effectiveness of support interventions among expatriate groups. Future research may wish to target diverse cohorts and incorporate a wider range of acculturation factors that impact expatriate adjustment and levels of postpartum depression.

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