Depression in Prenatal Period as Determinant of Postnatal Depression

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Globally over the recent years, concept of depression during prenatal and postnatal periods is acknowledged in a way that depressive illness around child birth may be a naturally occurring problem during the periods of maternal life. However, in developing countries, the issue of depression in prenatal and postnatal periods still needs to be researched and propagated among masses. Therefore, the present study aims to examine the predictive relationship of prenatal depression with postnatal depression. Initially 155 pregnant women completed the demographic form and EPDS (Edinburgh Postnatal Depression Scale) during the third trimester, however, postnatal sample, due to attrition, was reduced to 90 women, who were reassessed within four weeks after delivery, using EPDS. Predictive association of depression in prenatal period with postnatal depression is highly significant ($p < 0.01$). It is concluded that, to prevent women from depression in postnatal period, they should be prevented from depression in prenatal period.

Keywords: prenatal, postnatal, depression, Pakistan

Introduction

About 25%–28% of women living in rural areas in Pakistan fulfill the ICD-10 (International Classification of Diseases) criteria for depressive episode in prenatal and postnatal periods, respectively (Rahman, Iqbal, & Harrington, 2003). Prenatal period is a time of maturity and expectation, but it is also a time when the women are highly vulnerable to psychological harm. During prenatal period, women may find themselves in an extremely helpless and fragile condition. They are likely to experience emotional and sentimental perplexities between contentment and distress. Although unplanned conception has its own nuisance and unpleasant results, yet planned conception is still coupled with ambivalence regarding change in existing relations and developing relationship with an unborn child. The woman might be having a number of concerns, for instance, whether she is capable of becoming a mother, fulfilling all the responsibilities being a mother, a wife, and others. Though, a joyful event for most women, pregnancy is often a stressful period both physiologically (during the first trimester) and mentally (during the last trimester) (Rofe, Blittner, & Lewin, 1993).

Clinically postpartum onset of depression (postnatal depression) can be defined as the major depression occurring within four weeks (DSM-IV-TR (Diagnostic and Statistical Manual of Mental Disorders)) (American Psychiatric Association, 2000) to six weeks after delivery (ICD-10) (WHO (World Health Organization), 1992). The symptoms and clinical criteria of postpartum depression are considered similar to major depressive
disorder—DSM-IV-TR (American Psychiatric Association, 2000). Moreover, ICD-10 (WHO, 1992) classifies depression into three severity levels: mild, moderate, and severe. In addition, a high percentage of postpartum women report non-clinical levels of depressive symptoms, which may be classified as postpartum depressive symptoms or dysphoria (Horowitz, Damato, Solon, & Von Metzsch, 1996).

Literature indicates predictive significance of depression in prenatal period in the development of depression in postnatal period and the present research took the same aim. Previously, Beck (1996) found that prenatal depression places women at a greater risk for postnatal depression. This finding is consistent with a recently conducted study by Rahman and Creed (2007), who found that over half of mothers depressed in the third trimester of prenatal period continued to be depressed one year after giving birth. Likewise, Leigh and Milgrom (2008) found significance of depression in prenatal period not only as predictor of postnatal depression, but also as a dominant mediator between the relationship of other predictors (e.g., social support, history of abuse, negative cognitive style, etc.) and postnatal depression.

To our knowledge, there are fewer studies exploring long-term outcome of prenatal and postnatal depression in developing countries like Pakistan. Previously, studies were conducted to assess the mental health of women living in rural areas of Pakistan (Rahman et al., 2003; Rahman & Creed, 2007). Therefore, we designed the present study for urban women. Moreover, the study is an attempt to identify the role of significant risk factor in developing depression around childbirth; as it is intended to study the predictive relationship of depression in prenatal period with postnatal depression. Such studies can help to identify the course of depressive disorder and predictive factors, and formulate effective preventive and treatment strategies.

**Method**

**Sample**

Sample of 155 pregnant women was recruited from various hospitals located in urban areas of Karachi, Pakistan, and assessed during the third trimester of prenatal period. The age range of participants was 25–40 years old with the mean age of 28.2 years old (SD = 3.95), the minimum duration of marriage was two years and minimum qualification was graduation. Only those women who had no history of psychological or any serious medical problems were selected, which may associated with depressive symptoms, and whose husbands were available around childbirth (prenatal and postnatal periods). Postnatal subsample, due to attrition, was reduced to 90 women with the mean age of 28.4 years old (SD = 3.39). Among the remaining 65, some women were excluded purposively as they had a still birth or physically handicapped child and whose children died after delivery. The reason for this exclusion was to control the effects of bereavement and other emotional trauma. Moreover, some of them could not be contacted via phone and e-mail, some withdrew because of lack of time and few of them were restricted by their families for further participation in the research. Informed consent was obtained from concerned authorities and women participating in the study.

**Measure**

In the present study, all women were assessed through EPDS (Edinburgh Postnatal Depression Scale), a 10-item scale. It is valid and reliable instrument, developed to detect depression during prenatal and postnatal periods. It scored on a 4-point rating scale (0–3), in which high scores are indicative of increased severity of the symptom. The total score was obtained by adding the scores of all the items, most commonly used cut-off score
(i.e., > 12) was considered to distinguish women with depressive symptoms from overall sample. The EPDS is not specific for detecting depression only in postnatal period; it can also be used to screen depression in prenatal period (Josefsson, Berg, Nordin, & Sydsjö, 2001).

Results

The socio-demographic characteristics of sample (90 women) reflect the preponderance of graduate women (77.77%), however, only 22.22% were postgraduate. The mean age was 28.48 years old ($SD = 3.39$). For the family structure, sample reflects a large number of women with joint family structure (57.77%), while 42.22% were with nuclear family structure. Most of the women were nonworking (78.88%), hence predominantly, the results are based on the responses of housewives. The socioeconomic status sample distribution reveals that 25.55% of women belonged to low socioeconomic class, while 38.88% and 35.55% of women belonged to middle and high socioeconomic classes respectively. Linear regression analysis for the women during postnatal period reflects that depression in prenatal explains 37% variation (see Table 1) in the scores of the variable of depression in postnatal period ($F = 52.151$, $df = 1.88$, $p < 0.01$) (see Table 2). Thus, depression in prenatal period significantly predicts depression in postnatal period.

Table 1
Summary of Linear Regression Analysis With Depression in Prenatal Period as Predictor of Depression in Postnatal Period (N=90)

<table>
<thead>
<tr>
<th>Predictor</th>
<th>$R$</th>
<th>$R^2$</th>
<th>Adjusted $R$-square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression in prenatal period</td>
<td>0.610</td>
<td>0.372</td>
<td>0.365</td>
</tr>
</tbody>
</table>

Table 2
Analysis of Variance for Linear Regression Analysis With Depression in Prenatal Period as Predictor of Depression in Postnatal Period

<table>
<thead>
<tr>
<th>Model</th>
<th>SS</th>
<th>df</th>
<th>Ms</th>
<th>$F$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1,179.425</td>
<td>1</td>
<td>1,179.425</td>
<td>52.151</td>
<td>0.000</td>
</tr>
<tr>
<td>Residual</td>
<td>1,990.175</td>
<td>88</td>
<td>22.616</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3,169.600</td>
<td>89</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Discussion

Analysis revealed that depression in prenatal period explains 37% (see Table 1) variance in the scores of depression in postnatal period ($F = 52.151$, $df = 1.88$, $p < 0.01$) (see Table 2); consistent with previous findings (Rahman, Iqbal, & Harrington, 2003), that depression in prenatal period is a significant predictor of postnatal depression among women in Pakistan. This relationship can be explained with reference to cognitive schemas that may be affected by depression in prenatal period and further lead to depression in postnatal period. According to Sharf (2004), individual’s way of thinking about the world, their belief system and assumptions about people, events and environment constitute their cognitive schema. Sharf (2004) further elaborated that, there are two types of cognitive schemas positive (adaptive) and negative (maladaptive) and an adaptive schema in one situation can be maladaptive in another. This shifting of appraisal of schema may depend upon the personal and environmental circumstances. In cultures like Pakistan, women develop schema of themselves as being domesticated, caring, and self-sacrificing. Beck and Weishaar (1989) reported that schemas are developed from personal experiences and interaction with others. If women do not fulfill their ascribed...
feminine roles, in response to societal and familial demand, they may perceive themselves and be perceived by society as irresponsible and worthless. These schemas may be adaptive for women if they are fulfilling their responsibilities and are being judged as responsible housewives, despite of all their physical and emotional vulnerability in pregnancy. Similarly, the same schema can be maladaptive (negative) depending on the circumstances, stressor, and the appraisal of women. Women, who experience the feelings of helplessness and withdrawal as part of depression in prenatal period, may find themselves as incapable of fulfilling their responsibilities, as appropriately as they used to execute and expect. Here, women’s cognitive schema of being responsible, caring and otherwise worthless may become maladaptive, that in turn contributes in further alteration in mood of women after child birth. Women with such maladaptive schemas may feel unable to cope with stressors of augmentation in household tasks and other everyday responsibilities even after the birth of infant and consequently may assume themselves as worthless. According to Wisner, Hanusa, Peindl, and Perel (2004), this alteration can include symptoms of fatigue, feelings of worthlessness or guilt, diminished ability to concentrate, insomnia, or diminished interest or pleasure (depressive symptoms). Therefore, the cognitive schema developed in association with depression in prenatal period could be a causal pathway towards depression in postnatal period.

Psychological morbidity in prenatal period produces harmful effects on infant physical and psychological well-being and may in turn increase the risk of depression in postnatal period. It also has been suggested that anxiety and depression in prenatal period may be associated with poor infant outcome (Newport, Wilcox, & Stowe, 2002) in terms of low fetal birth weight and premature delivery (Gold & Marcus, 2008). Likewise, low birth weight and preterm births are associated with physical fragility and numbers of other serious health problem of infants. Women, whose infants are born with serious health issues, may feel guilty and accountable for the infant’s illness. Women experiencing depression in prenatal period do not take interest in their health status during pregnancy and most of the times miss their appointments with their gynecologists, which can be a considerable reason for poor health status of infants. Moreover, in this situation, women feel guilty and responsible for problems of infant’s physical well-being, consequently, they may get depressed. In addition, pediatric diseases in infants do not always precede their mother’s depression, however, the extra burden of caring a sick infant tends to increase the risk of developing postpartum depression (Motoko, Hiroshi, & Keiko, 2006). Thus, prenatal psychological vulnerability being associated with cognitive distortion, infant health status, and a number of factors can cause depression among postnatal women.

Yet, study has certain samples, for example, sample recruited for this purpose was comprised of women with minimum educational level of graduation; whereas, in Pakistan, large proportion of women usually do not complete their bachelors because of lack of opportunities or other reasons. Hence, the major portion of women is ignored in the present research. Similarly, only those women got opportunity to participate in the present research, who approached any hospital in pregnancy as the data were collected from selected hospitals. On the other hand, women unable to avail the facility of a hospital did not get the chance to participate in the study; which limited the scope of the present research. Therefore, study does not possess qualities on the basis of which results can be generalized to the entire population of Pakistani women.

Although the study is limited in certain ways, even though, it will be helpful in introducing the role of a mental health professional (clinical psychologist or counselor) in maternity hospitals and wards. These mental health professionals will design interventions and counseling programs as preventive measures for pregnant women that should be implicated since early pregnancy. Hence, the current research might be advantageous for
introducing psychotherapeutic services, for a probable victim. This effort will be helpful in identification and reduction of early psychological morbidity in women during prenatal period which may lead towards morbidity after giving birth. This study would also be beneficial for mental health and medical professionals (including psychologists, psychiatrists, gynecologists, and others mental health professionals), as it would play a vital role in providing awareness regarding the issue of prenatal and postnatal depression. Likewise, training programs and workshops should also be launched for nurses working in maternity wards. These programs should include initial counseling techniques and communications skills, e.g., empathetic listening, which provide opportunities for catharsis. Moreover, workshops and seminars should be conducted for obstetricians, gynecologists, and paramedics (nurses and midwives) working in maternity wards based on stress management skills. This management would enable them (nurses) to deal with women suffering from emotional setbacks around childbirth.

References


