Assessment of Postpartum Depression among Mothers Attending Primary Health Care Centers in Hawler City

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Abstract

Background and objectives: Postpartum depression is a global, life-threatening disorder which affects particular mothers in their post-natal periods. It's regarded to be one of the major disabling conditions of motherhood. We aimed to study the rate of, as well as assessing a group of psycho-obstetrical risk factors behind postpartum depression.

Methods: 98 newly gave-birth mothers were recruited with mean age of 27.07 year between the periods of November 2009 to February 2010. Edinburg Post-natal Depression Scale was adopted by authors for the assessment of postpartum depression. Comparisons on groups of demographic, obstetrical, and psychological data were done between both positive and negative mothers for the disorder.

Results: 39.8% of mothers were diagnosed as postpartum depression. For which, no particular demographic factors were significantly predictive for. Depressed mothers were of significant higher mean number of gestation with p value of 0.0472. However, no other obstetrical factors revealed back statistical significant differences. Past history of depressive disorders, whether post-natal or not, was significant predictor for current postpartum depression with p value of 0.02 for history of previous postpartum depression, and p value of 0.042 for non postpartum depressive disorders.

Conclusion: Postpartum depression is highly prevalent in our society. History of depressive disorders is a strong predictor for future postpartum disorder. However, there were no clear correlation between postpartum depression and other demographic and obstetrical data apart from the mean number of gestation.

Key words: Depression, Postpartum, Risk Factors.

Introduction

Maternal Postpartum Depression (PDD) is a universal and life threatening condition that lead to early maternal morbidity which is a leading cause for suicide. Therefore it is a leading cause of premature maternal morbidity and mortality worldwide. [1] In the first 3 months after childbirth, 14.5% of women have a new episode of major or minor depression [2], and 10-20% of mothers are believed to suffer from depression sometime during their postpartum course, making PPD the most common serious postpartum disorder. [3] According to American Psychiatric Association APA)'s Diagnostic (and Statistical Manual-fourth edition – text revised (DSM-IV-TR) criteria for depressive episode and mood disorders, symptoms of PPD do not differ from the symptoms of non-postpartum depressive disorder. [4] We aimed through present study to assess the rate of PPD among newly gave-birth mothers, and, further, to assess possible correlates and risk factors for this disabling psychiatric condition. Our main questions were whether PPD is more or less prevalent in our culture and whether our mothers share similar risk factors for PPD with mothers elsewhere.

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Methods

Participants:

We recruited all newly gave-birth mothers, at their fifth week to sixth month postnatal, conveniently, who did visit the 14 primary health care centers that offer peri-natal care services in Erbil city between the periods of November 2009 to February 2010. Fifth week to sixth month's postnatal period was considered by researchers because PPD mostly started and reached its peak during this period[5]; hence, avoiding misinterpretation of milder depressive condition of maternity blue which starts earlier in post partum period, and possible non-postpartum depression after the period of six months postnatal. 98 mothers fulfilled the above inclusion criterion.

Exclusion criteria include mothers with serious neuro-medical conditions and mothers with substance misuses. For which, none of the participants did fall.

Assessment:

All approached mothers were informed about the nature and the purpose of the study, and informed consents were obtained from them, stressing on confidentiality and anonymity for their participation in the study. Then after a set of demographic data were collected from each participant, including age, occupation, education, marital status, socio-economic status, and education of husbands as well.

Thorough obstetrical history obtained from each mother including: mode of last labor, gender of last baby, as well as history of any marital or other psycho-social problems during the last pregnancy. Furthermore, mothers were assessed for previous postpartum and non-postpartum depressive disorders.

For the diagnosis of current PPD, Edinburg Postnatal Depression Scale (EPDS) was adopted. EPDS is a standardized scale for assessment of PPD, which consists of ten item structured interview scales in which each item has a four point (0-3) anchored measure to produce a summative score ranging from (0-30).

Higher scores indicate lower maternal mood; for which, cutoff point of (10) is considered for labeling PPD. [6]

Statistical analysis:

Data recording and analyses performed through Statistical Package for Social Sciences- version 15 (SPSS-15). Differences in proportions were measured by adopting chi-square test for the dichotomous data. Normally distributed data were presented with means and standard deviations, and significance was tested by Student t-test .Tests were two-tailed. 0.05% was considered as a level of significance.

Results

We recruited 98 mothers; the mean age was 27.07 years. Mean years of formal education was 5.05 years. Also 89.8% of the mothers were housewife (unemployed). 1.02% was student, and only 9.2% were employed. Moreover, 73.5% of mothers were of low socioeconomic status, 19.4% of intermediate, and only 7.1% of high socioeconomic status. Finally, 16.3% of husbands were illiterate, 43.9% achieved only primary school, 28.6% secondary school, and only 11.2% of husband achieved higher education (Table 1). Table (2) shows the demographic differences between PPD positive and PPD negative groups. For which, no particular demographic variable discriminates first group from second one. In an attempt to compare the obstetrical factors between those who suffered from PPD and those without PPD, the study revealed back that number of pregnancies was significantly higher among PPD group with p value of 0.0472. Moreover, regarding the desire for the last pregnancy, the study shows significant difference between both groups (p = 0.036). Also, the difference regarding marital problems during last pregnancy was barely significant when 58.82% of those with such a history developed PPD with p value of 0.078. However, none of the rest obstetrical factors were statistically different between both groups (Table 3).

Regarding past history of depressive disorders, the study shows that both past PPDs and NON-PPDs were significant predictors for current PPD with p values of 0.02 and 0.042 respectively (Table 4).

Table 1: Description of the sample:

Number of the total sample		**98**
Age in years (M±SD)*		27.07±5.223
Years of formal education (M±SD)*		5.05±4.908
Marital Status (N (%)) *	Married	98(100%)
	Separated	0(0%)
	Divorced	0(0%)
	Widow	0(0%)
Employment (N (%)) *	Housewife	88(89.8%)
	Student	1(1.02%)
	Employed	9(9.18%)
Socioeconomic status (N (%)) *	Low	72(73.5%)
	Intermediate	19(19.4%)
	High	7(7.1%)
Education of husband (N (%)) *	Illiterate	16(16.3%)
	Primary school	43(43.9%)
	Secondary school	28(28.6%)
	College /Institute	11(11.2%)
PPD (N (%)) *	+ve	39 (39.8)
	-ve	59 (60.2)

*(M±SD) = Mean ± Standard Deviation
** (N (%)) = Number (Percent)

Table 2: Comparison of demographic variables between PPD +ve and PPD –ve groups:

		PPD+ve	PPD-ve	Test	P Value
Total N (%)		39(39.8)	59 (60.2)		
Age in Years (M±SD)		27.08±5.253	27.07±5.249	T = -0.008	0.993
Years of formal education (M±SD)		4.54 ±4.448	5.39 ±5.200	T = 0.839	0.403
Employment (N (%))	Housewife	35(39.77)	53(60.23)	X2 =0.742 df = 2	0.69
	Student	0(0.0)	1(100)		
	Employed	4(44.44)	5(55.55)		
Socioeconomic status (N (%))	Low	32(44.44)	40(55.55)	X2 =2.459 df= 2	0.293
	Intermediate	5(26.31)	14(73.69)		
	High	2(28.57)	5(71.43)		
Education of the husband (N (%))	Illiterate	9(56.25)	7(43.75)	X2 =4.9 df= 3	0.179
	Primary school	15(34.88)	28(65.12)		
	Secondary school	13(46.42)	15(53.58)		
	College /Institute	2(18.18)	9(81.82)		

Table 3: Comparison of psycho-obstetrical variables between PPD +ve and PPD –ve groups:

		PPD+ve	PPD-ve	Test	P Value
Total N (%)		39(39.8)	59 (60.2)		
Number of pregnancies (M±SD)		3.28±2.513	2.95±2.029	T = -0.722	0.0472
Number of Children (M±SD)		2.82±2.088	2.53±1.590	T = -0.793	0.430
Number of abortions (M±SD)		0.28±0.560	0.32±0.600	T =0.332	0.741
Number of stillbirths (M±SD)		0.13±0.339	0.22±0.744	T =0.724	0.471
Gender of the last baby (N (%))	Male	18(41.86)	25(58.14)	X2 =0.136 df = 1	0.712
	Female	21(38.18)	34(61.82)		
Mode of the last Labor (N (%))	Normal	13(43.33)	17(56.66)	X2 = 0.742 df = 1	0.69
	C.S.	26(38.23)	42(61.77)		
Marital problems during last pregnancy	Yes	10(58.82)	7(41.18)	X2 = 3.108 df = 1	0.078
	No	29(35.8)	52(64.2)		
Psychosocial problems during last pregnancy	Yes	5(62.5)	3(37.5)	X2= 1.874 df = 1	0.171
	No	34(37.77)	56(62.23)		

Table 4: Comparison of past history of depressive disorders between PPD +ve and PPD –ve groups:

		PPD+ve	PPD-ve	Test	P Value
Total N (%)		39(39.8)	59 (60.2)		
History of previous PPD	Yes	13(61.9)	8(38.1)	X2 = 5.453 df = 1	0.02
	No	26(33.76)	51(66.24)		
History of previous NON-PPD	Yes	8(66.66)	4(33.33)	X2 = 4.121 df = 1	0.042
	No	31(36.04)	55(63.96)		

Discussion

Prevalence of PPD:
To the authors' knowledge, this study is the first attempt to assess PPD in Kurdistan Region of Iraq. Results of our cross sectional study revealed that 39.8% of mothers were suffered from PPD (Table 1). This rate was relevant to studies conducted elsewhere. klainin and Arthur[7] reported 3.5% to 63.3% prevalence of PPD in different Asian cultures. Similarly Halbreich and Karkun [8] in a literature review of 143 studies on a prevalence of PPD in a wide range of countries found that PPD ranging from 0% to almost 60%, and reported that in some countries like Singapore, Malta, Malaysia, Austria and Denmark there are very few reports of PPD or postpartum depressive symptoms while in Brazil, Guyana, Costa Rica, Italy, Chile, South Africa, Taiwan and Korea, PPD symptoms are very prevalent.

This variability in the rate might be due to cross-cultural differences, reporting style, differences in perception of mental health and its stigma, differences in socio-economic environments and biological vulnerability. A large variety of diagnostic criteria and instruments may also explain this variation. [8]

Demographic Risk Factors:
In comparing the demographic variables, including age, employment, socioeconomic status, and education, there were no significant differences between both PPD positive and PPD negative groups, with p values larger than 0.05 (Table 2). Such a conclusion has been replicated, nearly unanimously, elsewhere including western as well as eastern societies like: USA[9], Australia[10], UK[11], Brazil[12], Iran[13], India[14], and Malaysia.[15]

In contrary to our finding, in France, researchers concluded that unemployment is a significant risk factor for PPD. [16] The reason may be due to also the effect of culture; in our culture, most of mothers are housewife and adapted to stay at home, and only take responsibly inside home and

.care for their children and husband, in contrast to European mothers who lived in industrialized developed community in which child rearing needs more costs and also due to the phenomena of single parent (mother) in their culture and hence she become obligated to works outside the home.

Obstetrical Risk Factors:
Our results in table 3 shows the comparison of a number of psycho-obstetrical factors between both groups; for which, apart from the number of pregnancies in which significantly was higher among PPD group, there were no significant differences between both groups. Instead, unexpectedly, unwanted last pregnancy was significantly higher in non PPD group. These findings were congruent with findings of researchers elsewhere regarding the number of pregnancies[11]; number of children[13]; number of abortions[17]; number of stillbirths[13,18]; gender of the last baby[13,19]; mode of the last labor[20]; and history of marital and other psychosocial problems during last pregnancy[21]. However, In contrast to our results, a longitudinal study among Chinese mothers in Hong Kong found that 2 or more previous induced abortions are significant predictors of PPD[22]. Such a difference between our finding and other results elsewhere might be due to the fact that induced and illegal abortion is extremely uncommon in our society, probably due to religious or other traditional prohibition on abortion. Moreover, keeping tight in contact with religion, probably made ladies in our society to accept abortion as God's wills, this is beside more social and family supports offered to women who gave abortion in our society.

Past Psychiatric History of Depressive Disorders:
Regarding previous experience of depression, whether postnatal or not, current study revealed well significant correlation between previous PPDs and non PPDs and current PPD, with p values of 0.02 and 0.042 respectively (Table 4). .

Such a correlation was, nearly unanimously, replicated in other literatures have been reviewed by authors in which psychiatrists agree on the fact that history of depressive disorders will raise the risk for future relapses.[11,16]

Conclusion

PPD is a prevalent morbid condition among ladies of our society which carries great risk of disability. Therefore, it's crucial for clinicians from different specialties to be aware of this disabling psychiatric problem. Apart from history of depressive disorders, no particular factor significantly amount to predict PPD. However, demographic, obstetrical and psychosocial factors, all together, have to be considered in predicting which pregnant lady may passed through to develop depression in the post-natal period.

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