

## PREVALENCE, PREDICTORS AND DETERMINANTS OF DEPRESSION IN WOMEN OF THE REPRODUCTIVE AGE GROUP

<sup>1</sup>SEEMA DAUD, <sup>2</sup>ROOTABA KASHIF AND <sup>3</sup>AFTAB ANJUM

<sup>1,3</sup>Departments of Community Medicine, <sup>2</sup>Behavioural Sciences, Lahore Medical & Dental College, Lahore

### ABSTRACT

*The purpose of this study was to find out prevalence, predictors and determinants of depression in women of reproductive age. The study was conducted in a peri-urban locality of Lahore. Among 186 respondents, 114 were less than 30 years of age (61%), 117 were Christians (62%) and 124 were educated (67%), 65 lived in nuclear family system (35%), with 148 women having 5 to 10 family members (79%), 174 were housewives (94%), 154 husbands were in regular employment (83%) and 107 women had family income of less than Rs. 5000 (58%). Among the study group, 123 women were married (66%), 19 were pregnant (15%) and 61 women had 3-4 children (50%). The present study prevalence of depression was 25%. Emotional and physical complaints like sadness, crying, irritability, loss of interest in life, sleeplessness, inability to work, tiredness, health worries, disappointment, self blaming, poor appetite and weight loss, were more in depressed respondents than non-depressed women ( $p < 0.001$ ). Among age group  $> 30$  years, 33% women were depressed compared to 19% in age group  $< 30$  years ( $p = 0.03$ ). Among uneducated respondents 35% were depressed in contrast to 19% of educated women ( $p = 0.02$ ). In nuclear family type, 35% respondents were depressed compared to 20% living in mixed family system ( $p = 0.03$ ). Among women with 3-4 children, 38% had depression in contrast with 19% with 1-2 children ( $p = 0.02$ ). The study concluded that depression in reproductive age women is not uncommon. Its emotional and physical predictors and socio-demographic determinants must be kept in mind while identifying its risk factors and planning its management.*

### INTRODUCTION

Women experience higher prevalence of both mental disorders and physical distress than men, and the prevalence of these is even higher for women of reproductive age<sup>1</sup>. Epidemiological data from diverse cultures indicate that the lifetime prevalence of major depression is twice as high in women as in men.<sup>2-4</sup> The higher prevalence of depression among women than men is due to higher risk of first onset, not to differential persistence or recurrence.<sup>3</sup> Various studies internationally and locally have quoted different prevalence rates for female depression. These vary in the type of communities studied and the physiological, psychological and social situation of the women being researched<sup>4-14</sup>. Studies estimate prevalence of depression of 20% to 30% in non-pregnant women<sup>15</sup>, and 25% to 43% in pregnant women.<sup>7,9,16</sup> High prevalence of depressive disorders in Pakistani women has also been demonstrated in local studies which suggest high proportion of population who experience social adversity.<sup>6,14</sup> The reason for these gender differences in depression is not clear, but both biologic and psychosocial factors are likely play a role. Many psychiatrists and sociologists have targeted the prevalence of depression in women as a consequence of gender differences in roles. It has been believed that certain stresses in a woman's life and how a woman handles these stresses makes a fe-

male more susceptible to depression. Social crisis also play an important role in genesis of female depression. These factors include illiteracy or low level of education, being unhappily married, being a housewife, relationship problems with husbands and in-laws, verbal abuse, increasing age, having more than four children in the family and financial difficulties at home.<sup>8,11-13</sup>

The objective of the present study was to find out the prevalence of depression and explore its predictors and determinants in women in the reproductive age group.

### SUBJECTS AND METHODS

A descriptive study was conducted between September and October 2007, to find out the prevalence of depression among women in the reproductive age group (15 to 49 years), residing in Tuls-pura, a peri-urban community of Lahore. In Tuls-pura, there were 186 women in the above mentioned age group and they were all included in the study. After taking informed verbal consent, women were interviewed, by administering a structured questionnaire which generated information on the socio demographic background of the respondents. Beck depression inventory (BDI)<sup>17</sup> was used to determine the prevalence of depression in these women.

Data was analyzed using version 10 of SPSS program.<sup>18</sup> Descriptive statistics was determined in terms of percentages. Chi square test was applied to compare the frequency of different socio-demographic and economic variables among the depressed and non-depressed respondents. These included age, religion, education, marital status, number of children, occupation, household size and monthly family income. The  $p$  value  $\leq 0.05$  was the cut off point for statistical significance.

## RESULTS

The socio-demographic profile of the respondents is depicted in table 1. Among 186 respondents, 114 were less than 30 years old (61%) and 72 were more than 30 years of age (39%), 117 were Christians (62%) and 124 were educated (67%), 121 lived in extended family system (65%), with 148 women having 5 to 10 family members (79%). Among the respondents, 174 were housewives (94%), 154 husbands were in regular employment (83%) and 107 women had family income of < Rs. 5000 (58%). The marital history revealed that 123 women were married (66%) and out of these only 19 were pregnant (15%) while 62 women had 1-2 children and 61 women had 3-4 children (around 50% each). Figure 1 illustrates that out of 186 respondents, 46 women (25%) were depressed. The further categorization of these respondents according to Beck's Depression Inventory, revealed that 41 women were suffering from mild to moderate disease (89%), while only 5 of them had severe depression (11%).

Emotional disturbances were important predictors of psychological disease as they were more widespread among women suffering from depression compared to their normal counterparts. As seen in Figure 2, depressed women were more prone to spells of sadness, crying, irritability, loss of interest in life, sleeplessness, inability to work, tiredness and undue worrying about their own health. The differential of emotional problems between the two groups was highly statistically significant ( $p < 0.001$ ). Other complaints of the depressed respondents included feeling of disappointment, self blaming attitude, bad appetite and weight loss. These findings were absent in the non-depressed women.

As presented in Table 2, it was observed that depression increased with age, as among age group > 30 years, 33% women were depressed compared to 19% in age group < 30 years ( $p=0.03$ ). Similarly, uneducated women were more prone to depression as among uneducated respondents, 35% were depressed in contrast to 19% of educated women ( $p=0.02$ ). In nuclear family type, 35% respondents were depressed compared to 20%

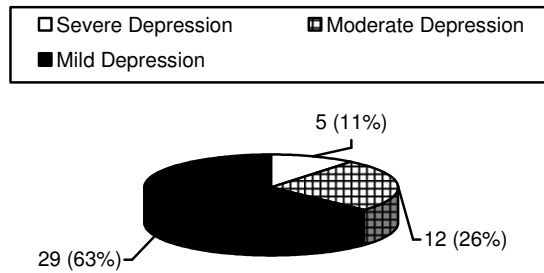
**Table 1:** Socio-demographic profile of 186 respondents.

Socio-demographic profile	n	%
<b>Age Group in years</b>		
15-19	39	21
20-29	75	40
30-39	43	23
40-49	29	16
<b>Religion</b>		
Islam	69	37
Christianity	117	62
<b>Formal Education</b>		
Uneducated	62	33
Educated	124	67
<b>Employment</b>		
Respondents		
Un-employed	174	94
Employed	12	6
Husbands		
Un-employed	32	17
Employed	154	83
<b>Monthly Family Income (Rupees)</b>		
$\leq 5000$	107	58
$> 5000$	79	42
<b>Family Setup</b>		
Joint	121	65
Nuclear	65	35
<b>Number of Family Members</b>		
2-4	20	11
5-7	88	47
8-10	60	32
>10	18	10
<b>Marital Status</b>		
Married	123	66
Unmarried	63	34
<b>If married, then pregnant</b>		
Yes	19	15
No	104	85
<b>If married, then, number of live children</b>		
1-2	62	50
3-4	61	50

living in mixed family system ( $p=0.03$ ). As the number of children increased so did depression. Among women with 1-2 children depression was 19% rising to 38% in women with 3-4 children ( $p=0.02$ ).

## DISCUSSION

In the present study the prevalence of depression

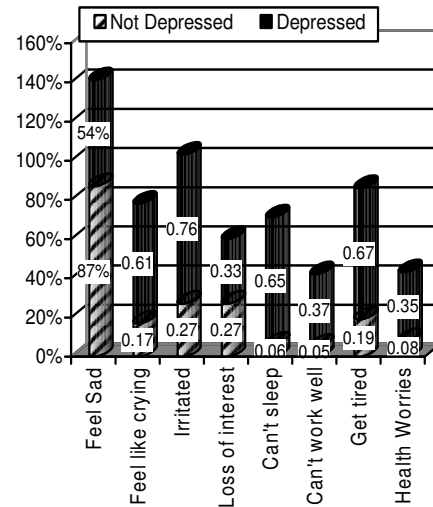


**Fig. 1:** Distribution of 46 respondents according to category of depression:

among women in reproductive age group (15 to 49 years) was 25%. In the USA, the lifetime prevalence of depression in community samples varied from 10% to 25% in women, with an average prevalence of approximately 20%.<sup>4</sup> However, female depression prevalence may vary in different physiological and environmental situations. Prevalence of antenatal depression was reported around 27% in a Canada based study<sup>7</sup> and 25% in a similar study in Lahore.<sup>9</sup> During post-partum period 42% of women have been found to have depression in Karachi<sup>8</sup>, 20% in Iran<sup>5</sup> and Lebanon<sup>10</sup> and 30% to 85% in USA.<sup>4</sup> Different studies conducted in Karachi Pakistan, alone yielded different female dep-

**Table 2:** Socio-demographic determinants of depression.

Socio-demographic profile	Depressed		Not Depressed		Test of Significance	
	n	%	n	%		
<b>Age Group in years</b>						
	<30 (114)	22	19	92	81	$X^2 = 4.67$ df = 1 p = 0.03
	>30 (72)	24	33	48	67	
<b>Formal Education</b>						
	Uneducated (63)	22	35	41	65	$X^2 = 5.31$ df = 1 p = 0.02
	Educated (123)	24	19	99	80	
<b>Family Setup</b>						
	Joint (121)	24	20	97	80	$X^2 = 4.46$ df = 1 p = 0.03
	Nuclear (65)	22	34	43	66	
<b>If married, then, number of living children</b>						
	1-2 (62)	12	19	50	83	$X^2 = 5.09$ df = 1 p = 0.02
	3-4 (61)	23	38	38	62	



**Fig. 2:** Differential in emotional disturbances between depressed and non-depressed Respondents ( $p < 0.001$ ):

ression rates. Exploring women in a lower middle class semi-urban community of Karachi, Ali et al., found 30% of women to be depressed<sup>13</sup> and in the same city, Gadit et al researching a fishing community, established female depression to be only 8%.<sup>11</sup> In a study on female depression in a tribal area of Pakistan, Husain et al. generated a prevalence rate of 45%<sup>6</sup> and in a village based study in Pakistan, they established the presence of depression in 54% women<sup>14</sup>. Mirza and Jenkins, while reviewing literature on depression prevalence and risk factors in Pakistan, came up with a female depression rate of 29% to 66%.<sup>12</sup>

Depressed respondents, compared with their non-depressed counterparts, showed explicitly high rate of emotional disturbances and physical complaints. This finding is not unique to the present study alone as patients with depression usually communicate their distress in non-psychological language. Senagupta discovered that depressed patients usually present with physical symptoms like pain, fatigue, loss of appetite and weight loss. In fact, the number of physical symptoms has been shown to highly correlate with presence of depression.<sup>19</sup> In their study, Gadit et al., concluded that depressed women were 26.5 times more dissatisfied with life, perceived their friends and relatives unhelpful, and reported addiction three time higher than the control group. They did not visit friends and relatives, and their relationships with parents,

spouse and children were not good as compared to the control group.<sup>11</sup> Hein et al., while investigating risk factors of depression, discovered that the most important symptoms elevating the risk of late-onset depression in a multivariate model were lack of joy and interest, poor concentration, insomnia, change appetite, lack of energy and joint pain.<sup>20</sup>

The main socio-demographic determinants of depression in the present study were age over 30 years, lack of education, nuclear family setup and having more than 3-4 children. Other studies have also deduced that social factors significantly contribute to the higher vulnerability of women to major depression.<sup>2,12,21</sup> Factors significantly associated with depression were age, being married, having more than four children in the family, illiteracy and financial difficulties at home.<sup>11-12</sup> Wisner et al., concluded that the lifetime risk of depression for women aged 25 to 44 years ranges from 10% to 25%.<sup>22</sup> Reproductive age group is especially vulnerable for psychological disturbances and is an independent risk factor for female depression. This could be attributed to specific physiological and sociological phenomenon of reproductive years like pre-menstrual tension,<sup>21,23</sup> pregnancy,<sup>22</sup> childbirth,<sup>1,7,9,16</sup> and bringing up children.<sup>21</sup> While conducting a review of literature in the USA, Desai et al., observed that a peak in first onsets of depression has been reported in women during their childbearing years, with women over age 30 years having the highest rate of recurrent depression.<sup>4</sup> In the present study, living in a nuclear family system was significantly associated with depression. Campbell et al., endorsed this finding<sup>24</sup> while Inem et al., inferred that a large proportion of subjects living in isolated nuclear families were depressed as they had weak or no family support.<sup>25</sup>

The study **concluded** that depression in women is not an uncommon finding which has easily recognizable emotional and physical predictors and criteria. The socio-demographic determinants of female depression must be kept in mind while identifying its risk factors and planning its management.

#### ACKNOWLEDGEMENTS

We are thankful to the Tulspura community for facilitating us in conducting the study, especially Ms. Nasreen who helped us with data collection. We highly appreciate the hard work of Ms. Asma Noreen in data entry and analysis.

#### REFERENCES

- Ahluwalia IB, Holtzman D, Mack K, Mokdad A. Health-related quality of life among women of reproductive age: Behavioral Risk Factor Surveillance System (BRFSS), 1998–2001. *J Womens Health (Larchmt)* 2003; 12: 5–9.
- Lorant V, Croux CE, Weich S, Deliège D, Mackenbach J, Anseau M, Depression and socio-economic risk factors: 7-year longitudinal population study *The British Journal of Psychiatry*. 2007; 190: 293-298.
- Kessler, RC. Epidemiology of women and depression. *Journal of Affective Disorders*. 2003; 74: 5-13.
- Desai HD, and Jann MW. Major Depression in Women: A Review of the Literature. *J Am Pharm Assoc*. 2000; 40 (4): 525-537.
- Najafi K, Zarrabi H, Shirazi M, Avakh F, Nazifi F. Prevalence of Postpartum Depression in a Group of Women Delivering in a Hospital in Rasht City, Iran. *JPPS*. 2007; 4 (2): 100-104.
- Husain N, and Chaudhry IB. Life stress and depression in a tribal area of Pakistan. *The British Journal of Psychiatry*. 2007; 190: 36-41.
- Bowen A and Muhajarine N. Prevalence of Antenatal Depression in Women Enrolled in an Outreach Program in Canada. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*. 2006; 35 (4): 491-498.
- Quraishy AM, Sultana K, Riaz Z. Postpartum depression: Liaquat National Hospital experience. *Med Channel*. 2005; 11 (1): 30-2.
- Niaz S, Izhar N and Bhatti MR. Anxiety and depression in pregnant women presenting in the OPD of a teaching hospital. *Pak J Med Sci*. 2004; 20 (2): 117-119.
- Chaaya M, Campbell OMR, El Kak F, Shaar D, Harb H, Kaddour A. Postpartum depression: prevalence and determinants in Lebanon. *Arch Women Ment Health* 2002; 5: 65-72.
- Gadit AA, Nisar N, Billoo N. Prevalence of depression and the associated risks factors among adult women in a fishing community. *JPMA, Journal of the Pakistan Medical Association*. 2004; 54 (10): 519-525.
- Mirza I and Jenkins R. Risk factors, prevalence, and treatment of anxiety and depressive disorders in Pakistan: systematic review. *BMJ* 2004; 328 (7443): 794.
- Ali BS, Rahbar MH, Naeem S, Tareen AL, Gul A, Samad L. Prevalence of and factors associated with anxiety and depression among women in a lower middle class semi-urban community of Karachi, Pakistan. *J Pak Med Assoc*. 2002; 52 (11): 513-7.
- Husain N, Creed F and Tomenson B. Depression and social stress in Pakistan. *Psychological Medicine*. 2000; 30: 395-402.
- Berenson AB, et al. Reproductive correlates of depressive symptoms among low-income minority women. *Obstet Gynecol*. 2003; 102: 1310-7.
- Cohen LS., Altshuler LL., Harlow BL., et al., Relapse of Major Depression During Pregnancy in Women Who Maintain or Discontinue Antidepressant Treatment. *JAMA*. 2006; 295 (5): 499-507.
- Beck AT, Ward CH, Mendelson M. An inventory for measuring depression. *Arch Gen Psychiatry*. 1961; 4: 561-71.

18. Statistical Package for Social Scientists (SPSS) Inc, Chicago, IL, USA; 1999.
19. Sengupta S. Diagnosis of depression in general practice. *Indian J Med Sci.* 2005; 59: 217-25.
20. Hein S, Bonsignore M, Barkow K, Jessen F, Ptak U and Heun R. Lifetime depressive and somatic symptoms as preclinical markers of late-onset depression. *European Archives of Psychiatry and Clinical Neuroscience.* 2003; 253 (1): 16-21.
21. Kendler KS, Thornton LM and Prescott CA. Gender Differences in the Rates of Exposure to Stressful Life Events and Sensitivity to Their Depressogenic Effects. *Am J Psychiatry.* 2001; 158: 587-593.
22. Wisner KL, Gelenberg AJ, Leonard H, et al. Pharmacologic treatment of depression during pregnancy. *JAMA* 1999; 282 (13): 1264-9.
23. Ling FW. Recognizing and treating premenstrual dysphoric disorder in the obstetric, gynecologic, and primary care practices. *J Clin Psychiatry.* 2000; 61 (12): 9-16.
24. Campbell TL and Bray JH. The Family's Influence on Health. *Textbook of Family Practice.* WB Saunders, Philadelphia. 2000; 6: 31-32.
25. Inem VA, Ayankogbe OO, Obazee EM, Ladipo MMA, Udonwa NE, Odusote K. Conceptual and contextual paradigm of the family as a unit of care. *Nig Med Pract.* 2004; 45 (1): 9-12.