

ORIGINAL ARTICLE

Epidemiological Co-relates of Depression among Housewives in Rural Area of District Ludhiana

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ABSTRACT

Background: Depression is the leading cause of disease-related disability among women in the world today. It is much more common among women than men. Very few data are available on depression among housewives in India. Therefore, this study was planned to study the epidemiological co-relates of depression among housewives in rural area of district Ludhiana. **Materials and Methods:** This study is a community-based cross-sectional study carried out in the field practice area of the Department of Community Medicine, Dayanand Medical College and Hospital, Ludhiana, Punjab. After calculating the sample size, 300 study subjects were included in the study by systematic random sampling. The information was collected on a pre-tested and pre-designed pro forma through interviews. **Results:** On taking the medical history of the subjects, H/o chronic disease/illness ($P = 0.000$) and H/o any previous episode of depression ($P = 0.006$) were found to be significantly associated with depression. Among the psychosocial factors, presence of any addiction in the family members ($P = 0.000$), reported verbal abuse by husband ($P = 0.000$) were found to be statistically significant. Among biological factors, age at marriage ($P = 0.016$), menopausal status ($P = 0.000$), and H/o infertility ($P = 0.000$) were found to be significant. On applying binary logistic regression, the factors which were found to be independently influencing the occurrence of depression in housewives are: Intake of medication, presence of patient of any debilitating illness or any addiction in the family members, H/o reported verbal abuse by husband, and H/o infertility. **Conclusions:** Biological and psychosocial factors contribute to the higher vulnerability of women to depression.

Key words: Biological factors, Depression, Housewives, Medical history, Psychosocial factors

INTRODUCTION

Mental illnesses are defined as “collectively all diagnosable mental disorders” or “health conditions that are characterized by alterations in thinking, mood, or behavior (or some combination thereof) associated with distress and/or impaired functioning.”^[1] Mental illness can occur at any age, but anxiety disorders and depression are quite common problems for young people. It can affect our thoughts, feelings, actions, and memory.

Depression is the leading cause of disease-related disability among women in the world today. It is much more common among women than men, with female/male ratio roughly 2:1.^[2] Depression is estimated to affect more than 350 million people globally.^[3]

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Depression is a complex phenomenon and there is no single factor which can explain the cause for depression. Stressful life events and lifestyle factors are seen to be closely related to the occurrence of depression in tropical countries like India.^[4] There are ups and downs in the life of humans, but when these changes hit severely to the humans to the extent that lifestyle or normal functioning of the humans is affected, it becomes depression. The stress is converted to depression when it crosses a threshold level.^[5]

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Very few data are available on depression among housewives in India. Therefore, this study was planned to study the epidemiological co-relates of depression among housewives aged 18–59 years in the rural area of district Ludhiana.

MATERIALS AND METHODS

This study is a community-based cross-sectional study carried out in the field practice area of the Department of Community Medicine, Dayanand Medical College and Hospital, Ludhiana, Punjab, from March 1, 2014, to February 28, 2015. The minimum sample size required for the study was calculated as follows.

$$n = \frac{Z^2 p(1-p)^{[6]}}{d^2}$$

Where n = sample size.

p = expected prevalence or proportion.

d = precision rate.

According to a study on depression in South India, the prevalence of depression in women is 16.3%.^[7]

Hereby taking,

Z = 1.96 (Approx. = 2, for level of confidence of 95 %)

p = 16.3 (=0.163)

d = 0.05

$$n = \frac{(2)^2 (0.163)(1-0.163)}{(0.05)^2}$$

n = 218

However, we included 300 subjects in our study.

The selection of the subjects was done by systematic random sampling. The information was collected on the pro forma through interviews by house to house visits. The subjects were asked about their medical history, their social and family problems, obstetrical and gynecological history. Each individual was told about purpose of the study and confidentiality of information was assured.

RESULTS

A total of 300 subjects aged 18–59 years were interviewed, 65 (21.7%) subjects were in age of 20–29 years, 93 (31%) in 30–39 years, 78 (26%) in 40–49 years, and 64 (21.3%) were in age group of 50–59 years. The mean age of the subjects was 38.89±10.25 years. Depression was assessed using Patient Health Questionnaire-9 (PHQ-9). As per PHQ-9, 129 (43%) subjects were found to have depression.^[8]

On taking the medical history of the subjects, H/o chronic disease/illness ($P = 0.000$), H/o any previous episode of depression ($P = 0.006$), and H/o any surgery ($P = 0.002$)

in the past were found to be statistically significant [Table 1].

Regarding social/family problems, the presence of any addiction in the family members ($P = 0.000$) and reported verbal abuse by husband ($P = 0.000$) were found to be significantly associated with depression. A statistically non-significant relationship was found between depression and presence of a family member suffering from any debilitating illness ($P = 0.057$) [Table 2].

It was observed that financial independence of the subjects ($P = 0.789$) and involvement in decision-making ($P = 0.233$) did not have a significant association with depression among housewives [Table 3].

Among biological factors, age at marriage ($P = 0.016$), menopausal status ($P = 0.000$), and H/o infertility ($P = 0.000$) were found to be significantly associated with depression. Age at first pregnancy ($P = 0.156$) had a non-significant relationship with depression among the study subjects [Table 4].

Binary logistic regression analysis model was performed using depression (0 = depressed and 1 = non – depressed)

Table 1: Association of medical history with depression among subjects

Characteristic	No.	Depression present (%)	Chi-square	P-value
Reported H/O any chronic disease/illness among subjects				
Yes	94	62 (65.9)	29.436	$P=0.000$
No	206	67 (32.5)		
H/O any previous episode of depression				
Yes	21	15 (71.4)	7.446	$P=0.006$
No	279	114 (40.9)		
H/O any surgery in the past				
Yes	135	71(52.6)	9.215	$P=0.002$
No	165	58 (35.2)		

Table 2: Association of social/family problems with depression among subjects

Characteristic	No.	Depression present (%)	Chi-square	P-value
Presence of any addiction in family members				
Yes	132	74 (56.1)	16.405	$P=0.000$
No	168	55 (32.7)		
Reported verbal abuse by husband				
Yes	14	12 (85.7)	10.932	$P=0.001$
No	286	117 (40.9)		
Presence of any debilitating illness in a family member				
Yes	15	10 (66.7)	3.608	$P=0.057$
No	285	119 (41.8)		

as the dependent variable and variables such as H/o chronic disease/illness, H/o previous episode of depression, H/o intake of medication for any chronic disease, H/o surgery in the past, good social relations, financial independence, consultation in decision-making, addiction in the family members, reported verbal abuse by husband, presence of patient of any debilitating illness in the family, age at marriage, menopausal status, H/o abortions, and BMI status as independent variables.

The variables which are found to be independently influencing the occurrence of depression in housewives are: Intake of medication, presence of patient of any debilitating illness in the family, presence of any addiction in the family members, H/o reported verbal abuse by husband, and H/o infertility.

The adjusted odds ratio for occurrence of depression and various factors, namely intake of medication, patient of any debilitating illness in the family, addiction in the family members, H/o reported verbal abuse by husband, H/o infertility was 7.006 ($P = 0.002$), 23.353 ($P = 0.000$),

3.765 ($P = 0.000$), 6.634 ($P = 0.044$), and 9.144 ($P = 0.002$), respectively. When “body mass index (BMI) status” was taken as the independent variable with normal BMI as the reference group, the odds for underweight, overweight, and obese were 4.607 ($P = 0.032$), 1.004 ($P = 0.994$), and 1.253 ($P = 0.617$), respectively [Table 5].

DISCUSSION

Depression is a disorder of major public health importance in terms of its prevalence and the suffering, dysfunction, morbidity, and economic burden. Depression is more common in women than men. The report on Global Burden of Disease estimates the point prevalence of unipolar depressive episodes to be 1.9% for men and 3.2% for women, and the 1-year prevalence has been estimated to be 5.8% for men and 9.5% for women.^[9] Women between the ages of 25 and 40 are 3–4 times more likely to become depressed than men.

The association between chronic disease and depression is well documented by public health researchers. Mental illnesses – most specifically, depressive disorders – are associated with an increased prevalence of chronic diseases.^[10] In the present study, 65.9% of the study subjects with reported H/o any chronic illness/disease had depression as compared to 32.5% of the subjects without H/o any chronic disease/illness ($P = 0.000$). This is in concordance with the study conducted by Patel et al.^[11] and Luni et al.^[12] The reason for this could be

Table 3: Association of personal history with depression among subjects

Characteristic	No.	Depression present (%)	Chi-square	P-value
Financial independence				
Yes	116	51 (44.0)	0.072	$P=0.789$
No	184	78 (42.4)		
Involvement in decision-making in the family				
Yes	255	106 (41.6)	1.421	$P=0.233$
No	45	23 (51.1)		

Table 4: Association of obstetrical and gynecological history with depression among subjects

Characteristic	No.	Depression present (%)	Chi-square	P-value
Age at marriage				
<18	29	15 (51.7)	8.303	$P=0.016$
18–23	214	99 (46.3)		
>23	57	15 (26.3)		
Age at first pregnancy				
<18	13	7 (53.8)	5.220	$P=0.156$
18–23	197	92 (46.7)		
24–30	78	26 (33.3)		
>30	4	01 (25.0)		
Menopausal status				
Yes	92	58 (63.0)	21.749	$P=0.000$
No	208	71 (34.0)		
H/o infertility				
Yes	23	18 (78.3)	12.63	$p=0.000$
No	277	111 (40.1)		

Table 5: Binary logistic regression analysis of depression

Predictors (parameters)	Depression present (%)	Odds ratio	95% CI	P-value
Intake of medication for chronic diseases				
Yes (R)	68.7	1	2.052–23.915	0.002
No	30.3	7.006		
Presence of patient of any debilitating illness in the family				
Yes (R)	66.7	1	4.821–113.117	0.000
No	41.8	23.353		
Presence of any addiction in the family members				
Yes (R)	56.1	1	1.871 – 7.577	0.000
No	32.7	3.765		
H/o reported verbal abuse by husband				
Yes (R)	85.7	1	1.053–41.811	0.044
No	40.9	6.634		
H/o infertility				
Yes (R)	78.3	1	2.303–36.315	0.002
No	40.1	9.144		
Body mass index status				
Normal (R)	39.7	1	0.365–2.757	0.994
Underweight	25.0	4.607		
Overweight	43.1	1.004		
Obese	47.7	1.253	0.517–3.037	0.617

that the long duration of chronic illnesses is associated with considerable stress and financial problems [Table 1].

Mental health depends on social harmony, social support, and sound family relations. The presence of any addiction in the family members was found to be significantly associated with depression among the study subjects ($P = 0.000$). Similar findings were reported by Chandran *et al.*^[13]

A wife's self-esteem and spirit are battered in the case of verbal abuse. A husband can kill his wife's spirit without even raising a hand against her. In the present study, the relationship of depression with verbal abuse by the husband was found to be highly significant ($P = 0.000$) [Table 2]. Similar findings were reported by Zainab *et al.*,^[14] Chowdhary and Patel,^[15] and Nisar *et al.*^[16]

A statistically non-significant relationship was found between depression and autonomy in decision-making ($P = 0.233$). Similar findings were reported by Patel *et al.*^[11] in their study.

It was observed that depression decreased with increasing age at marriage ($P = 0.016$). Similar findings were reported by Patel *et al.*^[11] in their study. The reason can be that with increasing age, women get mature and able to adjust to various changes that come with marriage.

Depression can occur at any time in a woman's life. They are more likely to suffer from anxiety and depression during periods of hormonal upheavals such as puberty, pregnancy, and menopause.^[17] Menopause marks a major life transition for women, an end to the childbearing years, and the cessation of the menses.^[18] It was observed that 63% subjects who had attained menopause had depression and 34% subjects who had not attained menopause had depression. The difference was found to be highly significant ($P = 0.000$) [Table 4]. The association of depression with infertility was found to be highly significant ($P = 0.000$). Infertility brings distressing emotions common to those who are grieving any significant loss – in this case, ability to procreate.

CONCLUSION

There are different underlying factors of depression among housewives. Biological and psychosocial factors contribute to the higher vulnerability of the women to depression. It is necessary for researchers and policymakers to understand the socio-cultural as well as the individual factors behind depression as they seek to evaluate and improve mental health programs.

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