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Original Research Article

Burden of depression among housewives residing in an urbanised village of Delhi: a cross sectional study

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ABSTRACT

Background: Depression is a common yet under-recognised mental health disorder among women, particularly housewives in urbanized settings facing social and economic stressors. The current study aims to estimate the prevalence of depression and its associated psychosocial environment, financial status, domestic environment, family responsibilities, physical restriction and safety among housewives of an urbanized village in Delhi.
Methods: A community-based cross-sectional study was conducted among 490 housewives in Aliganj, New Delhi, selected through systematic random sampling. Data were collected using a pre-tested semi-structured questionnaire and PHQ-9 for depression screening.
Statistical Analysis used: Statistical analysis included the Chi-square test and multivariable logistic regression, with significance at $p<0.05$.
Results: The mean age of participants was 37.4±11.11 years. The prevalence of depression (PHQ-9≥10) was 15.5%. Factors significantly associated with depression included lack of domestic support (AOR=2.42, 95% CI: 1.58–3.72), physical abuse (AOR=1.81, 95% CI: 1.40–2.10), family debt (AOR=1.92, 95% CI: 1.66–2.81), housewife by choice (AOR=3.35, 95% CI: 2.82–4.20) and verbal abuse (AOR=2.22, 95% CI: 1.35–3.60).
Conclusions: Depression among housewives was found to be substantial in the present study. Strengthening psychosocial support, improving domestic environments and community-level mental health interventions are crucial to enhancing women's well-being.

Keywords: Depression, Delhi, Housewives, PHQ-9, Psychosocial factors, Urbanized village

INTRODUCTION

Mental health is a state of well-being in which individuals realize their abilities, cope with daily stresses, work productively and contribute to society. According to the World Health Organization (WHO), depression affects about 5% of adults globally and is marked by persistent sadness, loss of interest, sleep or appetite disturbance, low energy and poor concentration.[1] In India, the National Mental Health Survey (2015–16) reported that nearly 15% of adults need mental health care, with one in every 20 suffering from depression. Over 2.5 lakh suicides were recorded in 2012, mainly among people aged 15–49 years.[2] Women are nearly twice as likely as men to experience depression, owing to gender-based stressors, limited autonomy and socio-economic disadvantage.[3] Housewives face unique psychosocial challenges such as financial dependence, high caregiving expectations and low social recognition. In India, their mental health issues often remain hidden due to stigma, family denial and poor access to care.[4] Validated tools, such as the Patient Health Questionnaire-9 (PHQ-9), are widely used to screen for depression, while instruments like the co-dependence assessment tool (CODAT) assess contributing psychosocial factors.[5] Studies in rural India report

depression prevalence among housewives up to 18%, but data from urban slums remain limited.[6] Rapid urbanisation, overcrowding and financial strain further worsen their mental distress.[7] Given these concerns, the present study aims to determine the prevalence of depression among housewives in an urbanised village of Delhi and identify associated socio-demographic, environmental and psychosocial risk factors.

METHODS

Study design and setting

A community-based cross-sectional study was conducted among housewives residing in an urbanised village located in South Delhi under the Kotla Mubarakpur ward. The village has a total population of 9,458 residing in 2,848 households. The study was conducted over an 18-month period from January 2024 to June 2025. Women were included in the study if they were not engaged in any economic activity and had a history of at least one marriage.

Sample size calculation

Based on a prevalence of depression among housewives of 18% 7, a 95% confidence interval and a 20% relative error, the sample size was calculated using the formula:

$n=Z^2\propto_{/2}PQ/L^2$

Substituting Z=1.96, P=18 and L=20% of prevalence. The estimated sample size was 437. After accounting for a 10% non-response rate, the final sample size was 490.

Sampling technique

Systematic random sampling was used to select participants. With 2,848 households and a required sample of 490, the sampling interval (N) was calculated as 2,848/490 ≈ 6. The first household was selected using a simple random (lottery) method and thereafter, every sixth household was included. One eligible housewife per household was interviewed. If a selected participant did not meet the inclusion criteria or was unavailable after three visits, the next household was selected by the Kish grid method.

Data collection tools

Data were collected using a pre-tested, semi-structured, interviewer-administered questionnaire in Hindi, comprising the following sections.

Socio-demographic details

Age, education, occupation and income (assessed using the Revised Modified Kuppuswamy Socioeconomic Scale 2023). Domestic and financial status. Domestic chores related history and psychosocial factors, patient health questionnaire-9 (PHQ-9).

RESULTS

The mean age was 37.44±11.11 years. The majority of study participants belonged to the reproductive age group. More than one-third (36.9%) of the study participants were illiterate. Further, more than one-third of the study participants were employed in skilled professions. The majority of the study participants were Hindus and belonged to lower-middle and upper-lower socio-economic classes (Table 1). The prevalence of depression assessed using PHQ-9 at a cut-off score of ≥10 was 76 (15.5%). Regarding severity, 74 (15.1%) cases were reported as moderate, 2 (0.4%) cases were reported as moderately severe and no cases of severe depression were identified. A large proportion of study participants who had no access to support in domestic work, like house help or family assistance, reported depression (22.8%). This prevalence was higher than that observed among those with access to support systems (11.2%). This association was found to be statistically significant (χ^2=11.16, p=0.008).

A significant number of study participants who reported restrictions on going out also experienced depression, with a prevalence rate of 28.4%. The association between restrictions and depression was found to be statistically significant (χ^2=23.01, p<0.001). 62 (18.6%) of study participants with family debt and depression, compared to 14 (8.9%) with no family debt. The association was statistically significant (χ^2=6.94, p=0.0084). Among study participants who experienced physical abuse, 12 (54.5%) reported symptoms of depression, while 10 (45.5%) did not. In contrast, among those who did not experience physical abuse, 64 (13.6%) reported depression and 404 (86.4%) did not. The association between physical abuse and depression was statistically significant (χ^2=23.76, p<0.001). Further, the association between feelings of safety and depression was also statistically significant (χ^2=28.24, p<0.001).

Among the study participants who reported having a chronic illness in their family, 65 (19.3%) experienced depression, while 271 (80.6%) did not. The association between having a chronic illness in the family and the occurrence of depression was statistically significant (χ^2=11.09, p<0.001). In the present study, no statistically significant association was observed between depression and several demographic or social factors. These included age group, type of family, educational status, socioeconomic status, bank account ownership, current marital status, being a housewife by choice, willingness to engage in economic activity, ability to adjust marital life, experience of verbal abuse by husband or family members, need to ask for money from the family breadwinner and presence of addiction among family members. Among the study participants, those who reported a lack of domestic support had 2.42 times higher

adjusted odds of experiencing depression (AOR = 2.42, 95% CI: 1.58–3.72, p<0.01). Similarly, women who reported physical abuse had a significantly higher risk of depression (AOR=1.81, 95% CI: 1.40–2.10, p=0.004). Family debt was also strongly associated with depression, with affected participants having nearly twice the odds of depression (AOR=1.92, 95% CI: 1.66–2.81, p=0.003). Participants' housewives, by their choice, were found to have more than three times higher odds of depression (AOR=3.35, 95% CI: 2.82–4.20, p=0.02). Verbal abuse also showed a significant association, with participants having more than twice the odds of depression (AOR=2.22, 95% CI: 1.35–3.60, p=0.002) (Table 2). Although chronic illness among family members and feeling unsafe at home showed elevated odds in the crude analysis, their associations reported no statistical significance after adjustment (AOR=1.42, 95% CI: 0.94–2.14, p=0.086, AOR=1.83, 95% CI: 0.62–2.89, p=0.066, respectively). Likewise, restrictions on going out and willingness to engage in economic activity were not statistically significant in the multivariable analysis (Table 2).

Table 1: Distribution of study participants according to sociodemographic characteristics (n=490).

Variable	Number (N)	(%)
Age (in completed years)		
18–30	167	34.3
31–40	151	30.8
41–50	121	24.6
51–60	32	6.5
>60	19	3.8
Educational status		
Illiterate	181	36.9
Primary school certificate	44	8.9
Middle school certificate	126	25.8
High school certificate	111	22.7
Intermediate/Diploma	4	0.8
Graduate	24	4.9
Occupation of head of family*		
Senior official and manager	10	2
Professionals (Dr./Lawyer/Teacher)	19	3.8
Technicians and associate professionals	29	5.9
Clerks	41	8.3
Skilled worker and shop/market sales worker	178	36.3
Craft and related trade worker	37	7.5
Machine operator and assembler	91	18
Elementary occupation (Cleaner, Helper, Delivery boy)	64	13
Unemployed	21	5.2
Socioeconomic status (Modified Kuppuswamy Scale 2023)		
Upper class (I)	12	2.4
Upper middle class (II)	74	15.2
Lower middle class (III)	191	38.9
Upper and lower class (IV)	178	36.4
Lower class (V)	35	7.1
Religion		
Hinduism	450	91.8
Islam	38	7.8
Christianity	2	0.4
Type of family		
Joint	133	27.2
Nuclear	357	72.8
Marital status		
Married	436	89
Widowed	34	7
Divorced	4	0.8
Separated	16	3.2

*As per the Modified Kuppuswamy Socioeconomic Status Scale, 2023.

Table 2: Association between variables and depression (multivariable analysis results).

Variable	Crude odds ratio (COR)	95% Confidence interval of COR	P value	Adjusted odds ratio (AOR)	95% Confidence interval of AOR	P value
Domestic support						
Present	1.66	1.38–1.99	<0.01	2.42	1.58–3.72	<0.01
Absent	Reference					
Restriction on going out						
Yes	1.63	1.20–2.08	0.1	1.42	1.10–2.61	0.14
No	Reference					
Physical abuse						
Present	2.04	2.03–2.07	<0.01	1.81	1.40–2.10	0.004
Absent	Reference					
Unsafe at home						
Yes	2.24	2.19–2.31	<0.02	1.83	0.62–2.89	0.066
No	Reference					
Family debt						
Present	2.12	1.74–2.56	<0.01	1.92	1.66–2.81	0.003
Absent	Reference					
Housewife by choice						
yes	4.20	3.36–5.20	<0.01	3.35	2.82–4.20	0.02
No	Reference					
Willing to engage in economic activity						
Yes	1.05	0.87–1.25	0.5	0.93	0.66–1.44	0.76
No	Reference					
Verbal abuse						
Present	3.24	3.19–3.33	<0.01	2.22	1.35–3.60	0.002
Absent	Reference					
Chronic illness amongst family members						
Present	2.18	1.87–2.64	0.03	1.42	0.94–2.14	0.086
Absent	Reference					

Note: p values<0.05 indicate statistically significant associations.

DISCUSSION

This community-based cross-sectional study, conducted among 490 housewives in Aliganj, an urbanised village in Delhi, assessed the prevalence of depression and its association with socio-demographic, domestic and psychosocial factors using the PHQ-9 scale. The findings highlight a considerable burden of depressive symptoms in this often-overlooked population group. The prevalence of depression (PHQ-9≥10) in the present study was 15.5%, with 15.1% moderate and 0.4% moderately severe cases. This indicates that, while most cases were mild to moderate, a notable proportion required attention. Comparable Indian studies report similar findings Jain et al, in Rajasthan (15.2%), Vikramaditya et al in Uttar Pradesh (18%) 6 and Das et al in Uttarakhand (19%) highlighting consistent patterns across regions.[8,9] Higher prevalence reported by Archana et al (26.1%) and Girdhar et al (43%) among peri- and postmenopausal women suggests the role of advancing age, hormonal factors and chronic morbidity.[10,11] In the study, depression rose from 9.6% in 18–30 years to 28.1% in 51–60 years, consistent with these trends.[12] Menopause increases vulnerability to depression because of estrogen fluctuation affecting serotonin and GABA signaling. The National Mental Health Survey (2015–16) reported a lower point prevalence (2.7%) due to the use of the MINI diagnostic tool (higher specificity, lower sensitivity) and inclusion of the general population, unlike our focused group of housewives who face greater psychosocial vulnerability.[13] Globally, the WHO estimates depression prevalence at ~4–5% and ~4.2% in South-East Asia, indicating that the burden among Indian housewives is nearly threefold higher.[14] Housewives are more prone to depression and are after overlooked due to societal expectations and the invisible nature of domestic work. Similar or higher prevalence has been documented in Bangladesh (28%), Malaysia (34.7%) and Korea (56%), explained by cultural, social and methodological differences.[14-16]

The mean age of participants was 37.4 years, depression increased with age, but was not statistically significant. In accordance with our study, Bansal et al reported an increasing trend of depression according to age, but the difference was not significant.[18] Age-related depression is linked to factors like medical conditions, social isolation, loneliness and major life changes such as retirement and loss of loved ones. Lower education was associated with higher depression (23.9%), aligning with findings by Girdhar et al that low literacy elevates risk.[11] Family debt

was associated with depression in a significant manner (18.6% vs. 8.9%, χ^2=6.94, p=0.0084), consistent with findings by Garg et al and George et al highlighting financial stress as a key determinant.[8,17]No significant associations were observed with socioeconomic class, family type or bank account ownership, though widowed or separated women had a higher prevalence (20.3%). These trends align with those of Archana et al and Das et al confirming the vulnerability of non-married women.[9,10] The women who did not have access to support reported having higher depression, which was statistically significant. Positive family environments may protect housewives' mental health by buffering stress from adverse experiences such as marital conflict, financial strain or caregiving burdens. Supportive relationships within the family help reduce depression and anxiety, promoting overall psychological well-being among housewives. Further, restrictions on going out and the presence of chronic illness in the family were also associated with depression.[19]

Verbal abuse was reported by 19.7% and physical abuse by 4.4%. Physical abuse was significantly associated with depression. (13.6%, p<0.001). Similarly, feeling unsafe at home was also significantly associated (47.2% vs 12.7%, p<0.001). These findings are consistent with Girdhar et al, linking violence, lack of autonomy and gender inequity to poor mental health.[11] Financial stress particularly family debt remained a significant predictor, while family addiction showed an elevated but non-significant association. The convergence of financial hardship, family illness and domestic violence forms a multidimensional stress environment for housewives.

The findings of this study should be interpreted in light of certain limitations. First, the cross-sectional design restricts the ability to infer temporal or causal relationships between depression and the associated psychosocial factors identified. Second, depression was assessed using the Patient Health Questionnaire-9 (PHQ-9), which is a screening instrument rather than a diagnostic tool; therefore, the possibility of misclassification of depressive symptoms cannot be completely ruled out. Third, several variables, including experiences of abuse, financial stress and domestic environment, were based on self-reported information and may be subject to recall bias and social desirability bias, potentially leading to underreporting of sensitive issues. Finally, the study was conducted in a single urbanised village in Delhi, which may limit the external validity and generalizability of the findings to other populations or geographical settings.

CONCLUSION

This community-based cross-sectional study among 490 housewives in an urbanised Delhi village found a depression prevalence of 15.5%, largely within the mild-to-moderate Depression. Lower Education status, family debt, lack of domestic support, restricted mobility and experiences of abuse or feeling unsafe at home emerged as important associated Factors. These findings show that depression among housewives is not only associated with socioeconomic characteristics but also with financial status details, psychosocial environment at home and domestic chores-related roles.

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Ethical approval: The study was approved by the Institutional Ethics Committee

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