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Mental Health Profile of Women in the Reproductive Age Group in the Rural Field Practice Area of RajaRajeswari Medical College and Hospital, Bengaluru

Manasa A R[1], Shashikala Manjunatha[2], Chandrakala C[3], Ramya K S[4]

[1]Assistant Professor, Department of Community Medicine, RajaRajeswari Medical College and Hospital, Dr. MGR Educational and Research Institute, Bengaluru, Karnataka, India
[2]Professor, Department of Community Medicine, RajaRajeswari Medical College and Hospital, Dr. MGR Educational and Research Institute, Bengaluru, Karnataka, India
[3]Statistician cum Assistant Professor, Department of Community Medicine, RajaRajeswari Medical College and Hospital, Dr. MGR Educational and Research Institute, Bengaluru, Karnataka, India
[4]Associate Professor, Sri Siddhartha Medical College & Hospital, Tumkur, Karnataka, India

Corresponding Author: Dr Manasa A R

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ABSTRACT

Background: Women in the reproductive age group are particularly susceptible to common mental disorders (CMDs) due to intersecting biological, psychological, and social determinants. Evidence from rural community settings in India remains limited.
Objectives: To estimate the prevalence of CMDs among women aged 15–49 years in a rural area of Bengaluru and identify associated socio-demographic and reproductive factors.
Methods: A community-based cross-sectional study was conducted from April 2024 to March 2025 in the rural field practice area of RajaRajeswari Medical College and Hospital. Using simple random sampling, 525 women were enrolled. Data were collected through a pretested semi-structured questionnaire and the World Health Organization Self-Reporting Questionnaire (SRQ-20). A cut-off score of ≥7 was used to screen for CMDs. Data were analyzed using descriptive statistics and chi-square tests.
Results: The prevalence of CMDs was 4.4%. Statistically significant associations were observed between CMDs and marital status as well as educational attainment ($p < 0.001$). No significant associations were found with religion, occupation, socio-economic status, type of family, or menstrual irregularities.
Conclusion: Although the overall prevalence of CMDs was low, specific socio-demographic vulnerabilities were identified. Incorporating routine mental health screening and targeted psychosocial interventions into primary healthcare services may facilitate early identification and management of CMDs among rural women.
Keywords: Common mental disorders; SRQ-20; women; reproductive age group; rural health; mental health screening

INTRODUCTION

In recent years, there has been a growing recognition of the profound impact of mental health disorders on women, particularly those in the reproductive age group. This stage of life, typically spanning from late adolescence to menopause, is marked by unique physiological, psychological, and

social factors that can significantly influence a woman's mental well-being.[1] From hormonal fluctuations to societal pressures, women in this age group face a myriad of challenges that can exacerbate or trigger mental health disorders.

Despite the increasing awareness and efforts to destigmatize mental health issues, many women continue to suffer in silence due to societal taboos, lack of access to healthcare resources, and cultural norms that prioritize the well-being of others over their own.

Understanding the complex interplay between biological, psychological, and social factors is essential for effectively addressing mental health disorders among women in the reproductive age group. Factors such as hormonal changes during menstruation, pregnancy, and menopause, as well as the stressors associated with career, relationships, and caregiving responsibilities, can all contribute to the development or exacerbation of mental health issues.

Common Mental Disorders include depression, anxiety and somatisation (medically unexplained somatic symptoms such as headaches and backache).[2] They are the non-psychotic affective disorders and are classified as separate diagnostic category in the International Classification of Diseases 10th Revision (ICD-10) as 'neurotic, stress-related and somatoform disorders'.[3] Women are at a greater risk of common mental disorders.[4]

Despite the increasing awareness and efforts to destigmatize mental health issues, many women continue to suffer in silence due to societal taboos, lack of access to healthcare resources, and cultural norms that prioritize the well-being of others over their own.

Not many studies are done to know the true estimate of burden of mental health problems among women in reproductive age group in community settings, especially in rural area. Most of the studies on common mental disorders were done in hospital settings, which makes it difficult to obtain realistic estimate of the burden of common mental disorders in the community.[5] This study will throw light on this problem and may give insights into steps that need to be taken to reduce this issue.

Hence, this community-based study was undertaken among women of reproductive age group, with the objective to describe the mental health profile of women in reproductive age group (15-49 years) in the rural field practice area of RajaRajeswari Medical College and Hospital, Bengaluru, to find out the burden of common mental health problems among the women in reproductive age group and to determine the factors associated with common mental disorders among women in reproductive age group.

MATERIALS AND METHODS

Study design and setting

A community-based cross-sectional study was conducted between April 2024 and March 2025 in Chunchunkuppe village, the rural field practice area of RajaRajeswari Medical College and Hospital, Bengaluru. The village has a population of 8,282 distributed across 2,101 households.

Study population and eligibility criteria

Women aged 15–49 years who had been residing in the study area for at least six months were eligible. Women unwilling to participate or unable to comprehend and respond to the questionnaire were excluded.

Sample size and sampling technique

The sample size was calculated using the prevalence (p) of common mental disorders among women of reproductive age group, 27.27% observed in a study by Tawar S. et al[6]. Assuming allowable error (E) of 15% of p (L=4.09) and a confidence interval of 95%, the sample size is calculated as follows:

$$n = \frac{4pq}{L^2}$$

where,

n- sample size,

p- prevalence,

q- (100-p),

$$L = \frac{E \times p}{100}$$

Hence n= 477. Taking a non-response rate of 10%, the final calculated sample size was 477+ 48 = 525 women.
Eligible women were enumerated and selected using simple random sampling.

Data collection tools and procedure
Data were collected through house-to-house interviews using a pretested semi-structured questionnaire comprising socio-demographic variables and the WHO Self-Reporting Questionnaire (SRQ-20). The SRQ-20 assesses symptoms experienced over the preceding 30 days using 20 dichotomous items. A cut-off score of ≥7 was used to identify probable CMDs.[7]
Anthropometric measurements were obtained in accordance with WHO guidelines, and body mass index (BMI) was calculated. Participants screening positive were referred to the affiliated tertiary care hospital for further evaluation and management.

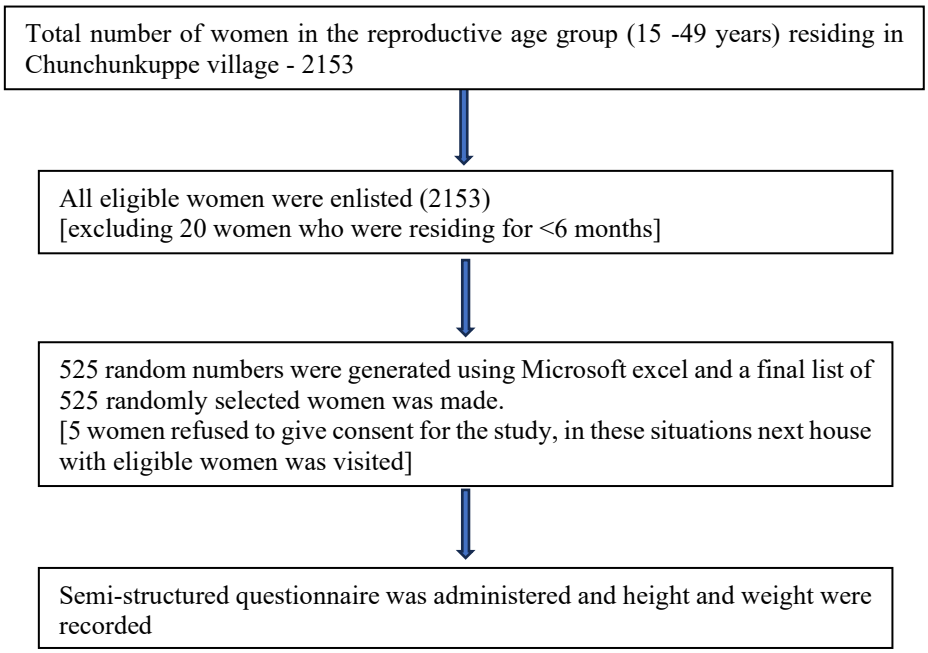


Figure 1: Sampling methodology

Statistical Analysis
Data were entered into Microsoft Excel and analyzed using SPSS version 21.0. Continuous variables were summarized using means and standard deviations, while categorical variables were presented as frequencies and percentages. Associations between CMDs and independent variables were examined using chi-square tests. A p-value <0.05 was considered statistically significant.

Ethical considerations
Ethical approval was obtained from the Institutional Ethics Committee of RajaRajeswari Medical College and Hospital. (Letter No.- RRMCH-IEC/112/2024). Written informed consent was secured from all participants prior to data collection.

RESULTS
A total of 525 women participated in the study. The mean age was 37.4 ± 9.3 years. SRQ-20 scores ranged from 0 to 20, with a mean score of 1.1±2.5. The overall prevalence of common mental disorders (CMDs) was 4.4%.

Table 1. Distribution of SRQ-20 scores among participants

SRQ-20 category	Number	Percentage
< 7	502	95.6
≥ 7	23	4.4
Total	525	100

Minimum age was 16 years and maximum age was 49 years. 99 (18.8%) belonged to the age group 30-34 years age group, 96 (18.3%) belonged to the age group 45–49 years, 95 (18.1%) belonged to age group of 35-39 years. Younger respondents aged 15–19 years formed the smallest group (3.8%).

The vast majority were married (88.8%), while 7.4% were single and 3.8% were widowed.

Almost all respondents were Hindu (99.6%), with a very small proportion of Muslims (0.4%). The largest proportion had completed high school (40.2%), followed by diploma/intermediate education (22.1%) and graduation/post-graduation (16.2%). Illiterates accounted for 7.6%, while those with primary (3.6%) and middle school education (10.3%) formed smaller groups.

Most respondents were homemakers (76.6%). Semi-skilled workers constituted 11.4%, skilled workers 7.4%, students 2.9%, and professionals 1.7%.

292 respondents (55.6%) belonged to upper lower class, 149 (28.4%) belonged to lower middle class, while 75 (14.3%) were from the upper-middle class. Very few respondents belonged to the lower class (1.5%) & upper class (0.2%) as shown in Table 1.

Table 2: Distribution of participants according to their socio-demographic characteristics

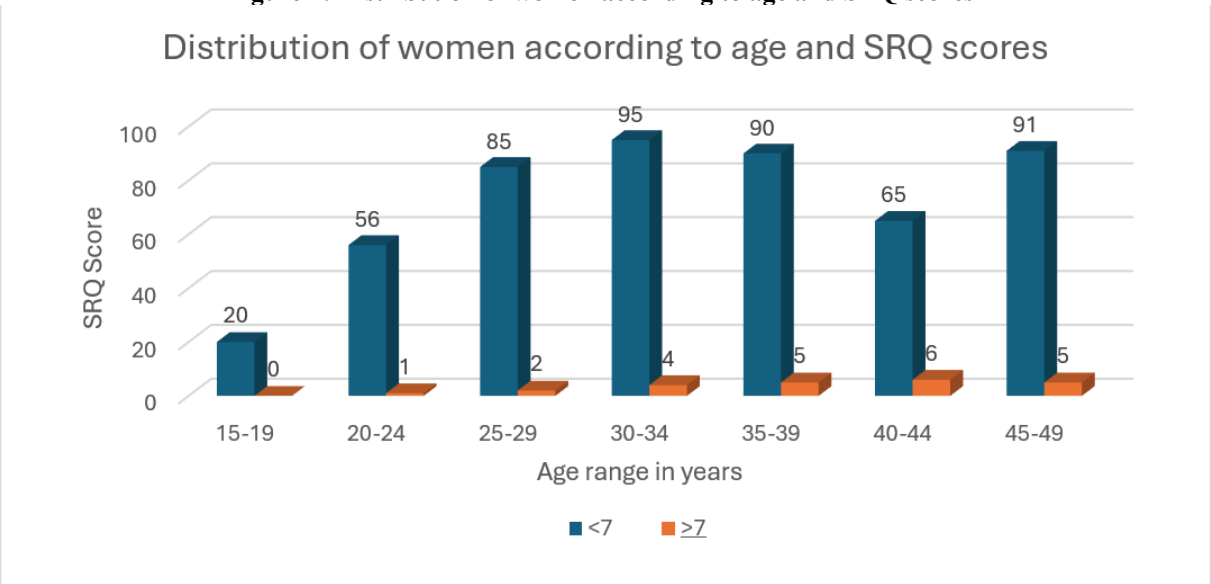
Age (in years)	**Total number**	**Percentages (%)**
15-19	20	3.8
20-24	57	10.9
25-29	87	16.6
30-34	99	18.8
35-39	95	18.1
40-44	71	13.5
45-49	96	18.3
Total	**525**	**100.0**
Marital status*		
Single	39	7.4
Married	466	88.8
Widow	20	3.8
Total	**525**	**100.0**
Religion		
Hindu	523	99.6
Muslim	2	0.4
Total	**525**	**100.0**
Education		
Illiterate	40	7.6
Primary school	19	3.6
Middle school	54	10.3
High school	211	40.2
Diploma/ Intermediate	116	22.1
Graduation/ Post graduation	85	16.2
Total	**525**	**100.0**
Occupation		
Home maker	402	76.6
Student	15	2.9
Semi-skilled worker	60	11.4
Skilled worker	39	7.4
Professional	9	1.7
Total	**525**	**100.0**
Socio Economic Class**		
Upper class	1	0.2
Upper middle class	75	14.3
Lower middle class	149	28.4
Upper lower class	292	55.6

Lower class	8	1.5
Total	**525**	**100.0**
Type of Family		
Nuclear	372	70.8
Joint	82	15.6
Three generation	71	13.6
Total	**525**	**100.0**

***None of the women belonged to 'divorced' or 'separated' category**
**** According to modified BG Prasad Classification**

30 (5.7%) respondents were underweight, 126 (24%) respondents had normal BMI, 134 (25.5%) were overweight, 217 (41.3%) were obese.

Figure 2: Distribution of women according to age and SRQ scores



Chi-square 5.9234, p value = 0.43

It was found that 25.0% of widows, 13.0% of women educated upto middle school, 22.2% of professionals, 22.5% of women belonging to lower class had high SRQ scores. There was no statistically significant association between religion and SRQ scores (Table 3).

Table 3. Association between independent variables and SRQ-20 scores using Univariate Logistic Regression

Sl No.	Variables	SRQ Score		Total (%)	Chi square statistic and p-value
		<7 n=502(%)	≥7 n=23(%)		
1	**Marital status***				
	Single	38 (97.4)	1 (2.6)	39 (100)	21.203 <0.001*
	Married	449 (96.4)	17 (3.6)	466 (100)	
	Widow	15 (75.0)	5 (25.0)	20 (100)	
2	**Religion**				
	Hindu	500 (95.6)	23 (4.4)	523 (100)	0.092 0.76
	Muslim	2 (100)	0	2 (100)	
3	**Education**				
	Illiterate	38 (95.0)	2 (5.0)	40 (100)	36.84 <0.001*
	Primary school	19 (100)	0	19 (100)	
	Middle school	47 (87.0)	7 (13.0)	54 (100)	
	High school	201 (95.3)	10 (4.7)	211 (100)	
	Diploma/ Intermediate	114 (98.3)	02 (1.7)	116 (100)	

	Graduation/ Post graduation	82 (96.5)	03 (3.5)	85 (100)	
4	**Occupation**				
	Home maker	403 (96.4)	15 (3.6)	418 (100)	15.93
	Student	47 (92.2)	4 (7.8)	51 (100)	0.04*
	Semi-skilled worker	36 (97.3)	1 (2.7)	37 (100)	
	Skilled worker	9 (90.0)	1 (10.0)	10 (100)	
	Professional	7 (77.8)	2 (22.2)	9 (100)	
5	**Socio Economic Class**				
	Upper class	1 (100)	0 (0)	1 (100)	2.61
	Upper middle	71 (94.7)	4 (5.3)	75 (100)	0.956
	Lower middle	145 (97.3)	4 (2.7)	149 (100)	
	Upper lower	278 (95.2)	14 (4.8)	292 (100)	
	lower	7 (87.5)	1 (22.5)	8 (100)	
6	**Type of Family**				
	Nuclear	355 (95.4)	17 (4.6)	372 (100)	0.138
	Joint	79 (96.3)	3 (3.7)	82 (100)	0.933
	Three generation	68 (95.8)	3 (4.2)	71 (100)	
7	**Menstrual cycles**				
	Irregular	39 (92.9)	3 (7.1)	42 (100)	0.269
	regular	463 (95.9)	20 (4.1)	483 (100)	0.604

CMDs were significantly associated with marital status, educational attainment and type of occupation. No association was observed with Socio-economic status, religion, family type or menstrual cycles.

DISCUSSION

The present community-based study assessed the burden of common mental disorders (CMDs) among women of reproductive age in a rural field practice area of Bengaluru and identified key associated factors. The overall prevalence of CMDs in this study was 4.4%, which is much lower than that reported by Tawar et al. in Maharashtra (27.3%), Patel et al. in Goa (23–30%), and Poongothai et al. in Tamil Nadu (14.6%), all of which documented a substantially higher burden of CMDs among women in the community.[6,8,9] Similarly, studies from Karnataka (Reddy et al. & K. Sathyanarayana, R. et al) and Uttar Pradesh (Jain S et al.) have reported CMD prevalence ranging from 12% to 35% among women of reproductive age.[10-12]

Internationally, studies from England (McManus et al. & Wildman J et al) and Brazil (Faisal-Cury A et al.) have shown CMD prevalence between 15% and 33%, particularly in rural and socio-economically disadvantaged settings.[13-15]

The relatively low prevalence in the present study could be attributed to several factors. Firstly, a higher SRQ-20 cut-off score (≥7) was used, whereas many studies have employed lower cut-offs (≥5 or ≥6), which are known to increase sensitivity and prevalence estimates. Secondly, social desirability bias and under-reporting may have influenced responses due to persistent stigma surrounding mental health issues in rural Indian communities. Third, the study area benefits from proximity to a tertiary care teaching hospital, which may contribute to better health awareness and access to services, indirectly reducing psychological distress.

In the present study, marital status showed a statistically significant association with CMDs with widowed women exhibiting the highest prevalence. This finding is consistent with studies by Patel et al., Tawar et al, both of which reported higher psychological morbidity among widowed, separated, or divorced women.[6,8] Loss of spousal support, social isolation, economic dependency, and increased caregiving responsibilities are well-documented contributors to poor mental health in this group.

In contrast, some studies (e.g., Poongothai et al.) reported higher CMD prevalence among married women, attributing it to marital

conflict and domestic stress. [9]These discrepancies highlight the context-specific nature of marital stressors and the importance of socio-cultural environments in shaping women's mental health outcomes.

Educational status was significantly associated with CMDs in the present study, with higher CMD prevalence among illiterate and less-educated women. This finding aligns with observations from Reddy et al.and Jain S et al., all of whom demonstrated a protective effect of education against CMDs.[10-12] Education enhances health literacy, coping skills, autonomy, and access to social and economic resources, thereby reducing vulnerability to mental disorders. The consistent association across studies reinforces the role of female education as a key social determinant of mental health.

Occupation showed a significant association with CMDs in this study. Higher SRQ scores were observed among professionals and students, though the absolute numbers were small. Other studies, such as those by Poongothai et al. and Patel et al., have reported higher CMD prevalence among homemakers due to role overload, financial dependency, and lack of social recognition.[8,9] Differences in occupational patterns and sample composition may explain the variation across studies.

The present study did not find a statistically significant association between the CMD and socio-economic classes. This may be due to the relative socio-economic homogeneity of the study population, with most participants belonging to the upper-lower and lower-middle classes. Similarly, no association was observed between CMDs and type of family. While some studies have reported higher CMD prevalence in nuclear families due to reduced social support, others have found increased stress in joint families due to interpersonal conflicts. The absence of association in the present study suggests that family structure alone may not be a sufficient predictor without considering relationship quality and social dynamics.

No significant association was found between CMDs and menstrual irregularities, a finding consistent with studies by Patel V et al. and Reddy et al.[10,16] However, other studies have suggested a link between hormonal changes and psychological distress, indicating the need for longitudinal research to better understand these relationships.

The findings of this study, when compared with existing literature, highlight the heterogeneity in CMD prevalence across settings and underscore the importance of context-specific screening strategies. Despite the low prevalence observed, vulnerable subgroups—particularly widowed and less-educated women—remain at increased risk.

Routine community-level screening using brief tools such as the SRQ-20, coupled with integration of mental health services into primary healthcare, has been strongly recommended across multiple studies and is supported by the present findings. Early identification at the primary care level can facilitate timely referral and intervention, thereby reducing long-term morbidity.

Limitations

The cross-sectional design cannot prove a causal inference. Self-reported data may be subject to recall and social desirability bias, potentially leading to underestimation of CMD prevalence. Additionally, findings from a single rural setting may limit generalizability to other populations.

CONCLUSION

The prevalence of common mental disorders among women of reproductive age in this rural community was low; however, marital status and educational level were significant determinants. Integrating routine mental health screening into primary healthcare services, with focused attention on socially vulnerable groups, may strengthen early detection and management of CMDs in rural settings.

Declaration by Authors

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