



# Common Mental Disorders among Rural Women of Reproductive Age

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## Abstract

**Introduction:** Common mental disorders (CMD) encompass depressive disorders, anxiety disorders, and somatoform disorders. A 2017 report on mental health indicated that 197.3 million people in the country were living with mental disorders.

**Material and methods**

Study was conducted in the rural area of district Meerut. Study population was assessed using the Self-Reporting Questionnaire-20 (SRQ-20) and total of 267 participants were interviewed.

**Results:** Present study reported 41 (15.4%) prevalence of common mental disorders (CMD) in 267 women. Statistically higher number of participants i.e., 07 (58.3%) from broken families suffered from CMD ( $p < 0.0001$ ). Highest prevalence of CMD was observed in women aged 40-49 years (21.7%) and in women who were underweight (28.6%).

**Conclusion:** The present study suggested higher prevalence of CMD in women of reproductive age group (15-49 years) in rural area of Meerut, as compared to national average for rural India. It was significantly associated with various sociodemographic factors and nutrition status of these women.

**Keywords:** Common Mental Disorders; Women of Reproductive Age Group; Nutrition; Broken Family; Rural Area

## Abbreviations

CMD: Common mental disorders; SRQ-20: Self-Reporting Questionnaire-20; WHO: World Health Organization; BMI: Body Mass Index; NMHS: National Mental Health Survey.

## Introduction

The World Health Organization (WHO) defines mental well-being as a state in which individuals recognize their own potential, manage the normal stress of life, work productively, and contribute to their communities. Mental well-being is an essential component of health, forming a

cornerstone of WHO's broader definition of overall health. Poor mental health can manifest in various ways, including persistent worry, unexplained difficulty in concentrating, continuous feeling of unhappiness, irritability, insomnia, mood fluctuations, and an inability to manage emotions effectively. These symptoms often indicate underlying mental health concerns.

Somatoform disorders, anxiety, and depression are considered as common mental disorders (CMD). These conditions are characterized by symptoms such as persistent low mood, anxiety, irritability, fatigue, sleep disturbances, difficulty with memory and concentration, and somatic

complaints. Due to their high prevalence, CMD are considered widespread in communities across the globe.

Mental health issues affect a significant proportion of the population worldwide. WHO global report on mental health suggests that one in eight individual lives with a mental disorder. Depression and anxiety were the most prevalent mental disorders, affecting around 970 million individuals in 2019. The COVID-19 pandemic further exacerbated the burden of mental illness, with initial estimates revealing 26.0% increase in anxiety disorders and a 28.0% rise in major depressive disorders within a year. Anxiety disorders alone affected 301 million people in 2019, of which 20.0% were children and adolescents. Anxiety disorders are marked by excessive fear, worry, and related behavioural disturbances. Similarly, 280 million people in the same year suffered from depressive disorder, including 23 million children and adolescents. Unlike typical mood fluctuations, depression involves prolonged periods of sadness, irritability, or emptiness, as well as a loss of interest in activities, lasting for at least two weeks [1].

India has a significant burden of mental disorders. A 2017 report on mental health indicated that 197.3 million people in the country were living with mental disorders, including 45.7 million with depressive disorders and 44.9 million with anxiety disorders. The State Mental Health Survey Report (2017) revealed that 8.7% of Uttar Pradesh's population suffers from some form of mental illness. Additionally, urban areas have a significantly greater prevalence of common mental diseases (13.7%) as compared to rural areas (5.0%). According to census (2011), More than three-fourth (77.7%) of the population of Uttar Pradesh resides in rural areas, it suggests that prevalence of 5.0% constitutes a significant number [2,3].

## Aim and objectives

The present study was planned to assess the prevalence of common mental disorders and their association with age, type of family and nutritional status in rural women of reproductive age group (15-49 years).

## Materials and Methods

**Study area:** The present study was conducted in the rural area of district Meerut (Uttar Pradesh). The study was conducted among population covered by Community health centre Machhara block in Meerut district, which is a rural field practice area of Department of Community medicine, LLRM Medical College, Meerut.

**Study design:** Community based cross sectional study.

**Study population:** Women of reproductive age group (15 to 49 years) residing in rural field practice area of LLRM

Medical College, Meerut.

**Sample size:** Sample size was calculated taking the prevalence of common mental disorders in women of reproductive age group (15-49 years) as 18.7% from previous study [4].

$$N = Z^2_{\alpha/2} \times p \times q / d^2$$

N = required sample size,  $Z^2_{\alpha/2}$  is 3.84, p is prevalence, d is absolute precision taken as 5%.

$$N = 3.84 \times 18.7 \times 81.3 / 25$$

N = 233, taking 15% non- response rate among respondents  $0.15 \times 233 = 34$ .

Sample size came out to be  $233 + 34 = 267$

## Sampling Technique

Data collection was done using simple random sampling. First household near the Community Health Centre, Machhra (Meerut) was selected randomly by using pencil drop method. The house facing towards the tip of pencil was taken as first household. Subsequent households to the left of the first house were included in the study until the required sample size was achieved.

## Tools and Measurements

After taking consent and ascent from the guardians and beneficiaries respectively, the presence of common mental disorders (CMD) in the study population was assessed using the Self-Reporting Questionnaire-20 (SRQ-20). This 20-item screening tool, developed by the World Health Organization, employs a yes/no format to identify CMD. Respondents reported on symptoms experienced in the past four weeks, and a cut-off score of 10 or higher indicated the presence of a CMD. Anthropometric measurements included height, measured in centimetres using a measuring tape, and weight, recorded in kilograms using a digital bathroom scale. Body Mass Index (BMI) was calculated using the formula  $BMI = \text{Weight (Kg)} / (\text{Height in metres})^2$ . Pregnant women (n = 10) were excluded from nutritional assessment.

## Study Criteria and Data Analysis

**Inclusion criteria:** Women of reproductive age (15-49 years) residing in Machhra village who were willing to participate.

**Exclusion criteria:** Those not willing to participate or suffering from chronic debilitating illnesses.

A total of 267 participants were interviewed during July-December, 2019, and the collected data was entered into MS Excel for statistical analysis. Chi square was used as the test of statistical significance, and p- value of less than 0.05 was considered significant. The ethical committee of the institution provided ethical approval for the study.

## Results

The current study revealed that among 267 women in the reproductive age group (15-49 years), 41 (15.4%) suffered from common mental disorders (CMD). Prevalence of CMD increased with increase in age of the participants, as highest prevalence of CMD was observed in women aged 40-49 years i.e., 13 (21.7%). In women of 15-19 years age group, CMD was present in 01 (5.3%), making it the lowest prevalence group. The association of age with prevalence of CMD was statistically not significant ( $p > 0.05$ ), as shown in table 1.

Age	Common mental disorders			p- value
	Present n (%)	Absent n (%)	Total n (%)	
15-19 years	01 (5.3)	18 (94.7)	19 (7.1)	$\chi^2 = 3.97$ $p = 0.27$
20-29 years	16 (13.0)	107 (87.0)	123 (46.1)	
30-39 years	11 (16.9)	54 (83.1)	65 (24.3)	
40-49 years	13 (21.7)	47 (78.3)	60 (22.5)	
Total	41 (15.4)	226 (84.6)	267 (100)	

**Table 1:** Association between age and common mental disorders.

Table 2 revealed the association between CMD and type of family as follows: lower prevalence of CMD was noted in joint families 14 (10.0%), as compared to nuclear families 20 (17.4%), whereas statistically higher number of participants i.e. 07 (58.3%) from broken families suffered from CMD ( $p < 0.0001$ ). In the present study, highest prevalence of CMD was observed in underweight women 06 (28.6%) and lowest among normal weight women 14 (12.2%) as shown in table 3. However, the association between nutritional status and prevalence of CMD was not significant ( $p > 0.05$ ).

Type of family	Common mental disorders			p- value
	Present n (%)	Absent n (%)	Total n (%)	
Nuclear	20 (17.4)	95 (82.6)	115 (43.1)	$\chi^2 = 20.51$ $p < 0.0001^*$
Joint	14 (10.0)	126 (90.0)	140 (52.4)	
Broken	07 (58.3)	05 (41.7)	12 (4.5)	
Total	41 (15.4)	226 (84.6)	267 (100)	

\*Significant p- value

**Table 2:** Association between type of family and common mental disorders.

Body mass index (BMI)	Common mental disorders			p- value
	Present n (%)	Absent n (%)	Total n (%)	
Under weight	06 (28.6)	15 (71.4)	21 (8.1)	$\chi^2 = 3.92$ $p = 0.27$
Normal	14 (12.2)	101 (87.8)	115 (44.7)	
Over weight	05 (15.2)	33 (84.8)	38 (14.9)	
Obese	13 (15.7)	70 (84.3)	83 (32.3)	
Total	38 (14.9)	219 (85.1)	257 (100)	

\*Pregnant women (n = 10) were excluded for nutritional status assessment

**Table 3:** Association between nutritional status and common mental disorders.

## Discussion

The present study revealed the prevalence of common mental disorders (CMD) in women from rural areas as 15.4%. The findings were comparable with that of Jha S, et al. [5] who reported CMD prevalence of 15.3% in women from rural area of Haryana. CMD prevalence in India, as per National Mental Health Survey 2016 (NMHS) was 5.0% and 13.7% in rural and urban areas respectively, it suggest that the present study had higher prevalence of CMD as compared to NMHS-2016 [2,3]. Sagar R, et al. also reported prevalence of CMD in rural area as 5.5% which was also lower as compared to present study [6,7].

The current study also reported that prevalence of CMD increased with increase in age, as the prevalence of CMD was highest in women aged 40-49 years (21.7%), although the findings were not statistically significant. NMHS-2016 also reported increase in prevalence of CMD with increase in age, as 6.0% of the women aged 50-59 years had CMD compared to 5.7% in 40-49 years age group [2,3]. Shindhaye R, et al also reported increase in prevalence of CMD with increase in age, 10.7% in 30-39 years age group [8].

Prevalence of CMD was significantly associated with type of family highest prevalence was reported in broken families (58.3%) ( $p < 0.0001$ ) in the present study. Similarly, Shindhaye R, et al. [8] revealed significant association between prevalence of CMD and relationship with husband in married women ( $p < 0.05$ ). Narayanan G. et al also reported that broken, heterosexual relationship, divorce, interpersonal conflicts, and distress over rules imposed by the society were significant factors contributing to poor mental health [9].

The current study had reported highest prevalence of CMD in undernourished women (28.6%) but the findings were not statistically significant. Similarly, Singh JK, et al. [10] in Varanasi revealed that underweight and food insecurity were significant factors leading to CMD. (Anxiety- adjusted odds ratio 3.10, depression- adjusted odds ratio 2.95).

## Conclusion

The present study suggested higher prevalence of CMD in women of reproductive age group (15-49 years) in rural area of Meerut, as compared to national average for rural India. Findings also suggested that prevalence of CMD increased with increase in age and CMD was significantly associated with type of family, with broken families being adversely affected. CMD was more common among underweight women compared to normal weight and obese women.

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