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A CROSS-SECTIONAL STUDY OF POTENTIAL MENTAL HEALTH PROBLEM IN ADULT WOMEN LIVING IN URBAN SLUMS OF HYDERABAD

Kiran Mai B[1], K. Srinivasan[2], Niharika B[3], Sindhu Priya[4]

ABSTRACT: INTRODUCTION: Mental illness has a significant burden on morbidity and disability. The problem is higher than previously thought due to urbanization and modernization. There could be a significant level of unidentified and unmet need within this group, so a genuine attempt has been done to screen for potential mental health problem in adult women. **OBJECTIVES:** 1.To estimate the proportion of potential mental health problem. 2. To study the selected risk factors for potential mental health problem. **MATERIALS AND METHODS**: This study was done on 440 adult (18 yrs and above) females residing in urban slum areas of Hyderabad city. Data was collected using a pre-structured questionnaire during house-to-house visits regarding mental health using Meninger's scale, age, marital status, socio-economic status and other selected risk factors; physical examination included pallor, height and weight. Data was analyzed using proportions and chi-square test. **RESULTS:** The overall potential mental health problem in adult women was 66.8%. Age above 45 yrs, married women, lower socio economic status, house-wives, use of OTC analgesics, age at first childbirth, lack of physical activity, pallor and overweight/obesity were significantly associated with potential mental health problem. **CONCLUSION:** These analyses show that mental health of women is influenced by many factors and the burden is very high. **RECOMMENDATIONS**: There is an urgent need to increase awareness regarding mental hygiene and strengthen National Mental Health Programme in India and help people lead a productive life.
KEYWORDS: Adult women, Mental health.

INTRODUCTION: In the Global Burden of Disease, it is estimated that depression will become the second most important cause of disease burden in the world by the year 2020; followed by violence and self-inflicted injuries.[1]Prevalence of psychiatry morbidity ranges from 23.7% to 63.8% and it is more common in women when compared to men according to various studies.[2,3,4,5]

Woman's social position, poverty, health status, violence against women, poor health seeking behavior etc., have ill effects on her mental health. A mother's mental health obviously affects the health of the child ultimately affecting the whole family health.

Inspite of being so common, mental illness is underdiagnosed by the doctors though most of the patients meet diagnostic criteria. There are gender differences especially in the common mental disorders like depression, anxiety and somatic disorders, in which women predominate, affecting 1 in 3 people in the community, hence constitutes a serious public health problem. Gender differences have been reported in age of onset of symptoms, frequency of psychotic symptoms, course of these disorders, social adjustment and long term outcome.[6]

The high prevalence of sexual and domestic violence to which women are exposed, renders women the largest single group of people affected by this disorder.

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The present study has been conducted with the following objectives:
1. To estimate the prevalence of potential mental health problem in adult women residing in urban slums of Hyderabad.
2. To study the selected associated factors for potential mental health problem in adult women.

MATERIALS AND METHODS: A cross-sectional study was conducted in urban slums of Hyderabad City, A. P. (Bholakpur, IDH colony, Nizampet village, Rajivnagar colony) among 440 adult women of age group 18 yrs and above for a period of 4 months (May 2014 to Aug. 2014). The minimum sample size is 335 which was estimated using the formula $n=4PQ/L^2$ (where, Prevalence (P)=23% and allowable error (L) =20% of P).[7]

Data was collected during house-to-house visits using a pre-structured questionnaire. Mental health status was assessed using Menninger's scale which includes questions on warning signals of poor mental health.[8]

MENNINGER'S SCALE:

1. Are you always worrying?
2. Unable to concentrate?
3. Continually unhappy without justifiable cause?
4. Lose your temper easily and often?
5. Troubled by regular insomnia?
6. Wide mood fluctuations- [depression-elation-depression]?
7. Continually dislike being with people?
8. Upset, if routine is disturbed?
9. Do your children consistently get on your nerves?
10. Afraid without real cause?
11. You are always right and others are wrong?
12. Vague aches and pains for which no doctor could find a physical cause?

General physical examination was also done including pallor, height & weight etc; Asian Indian's cut-off points were used for classifying generalized obesity in the study population. i.e. Normal BMI= 18-22.9, Overweight BMI =23-24.9 and Obesity BMI > 25.[9]

Modified Kuppuswamy scale (2014) was used for classifying socio-economic status.[10]

Data thus collected was analyzed using proportions and chi-square test using EpiInfo 7.0 software.

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RESULTS: Out of 440 subjects 294 (66.8%) had potential mental health problem (Fig. 1).

Fig 1- Proportion of subjects with potential mental health problem in the present study
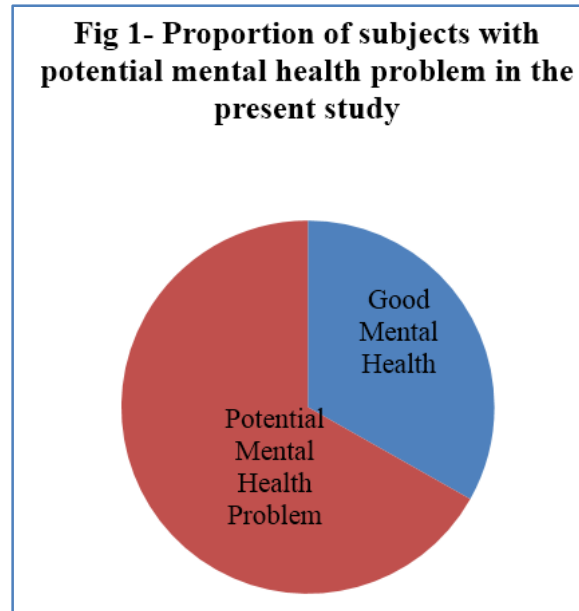
Among 294 subjects with potential mental health problem, 68 subjects (81%) were of age 45 yrs and above and 226 women (63.5%) were belonging to age below 45 yrs (Fig. 2). This difference between two proportions was found to be statistically significant (p< 0.05).

Fig 2- Age distribution of study population
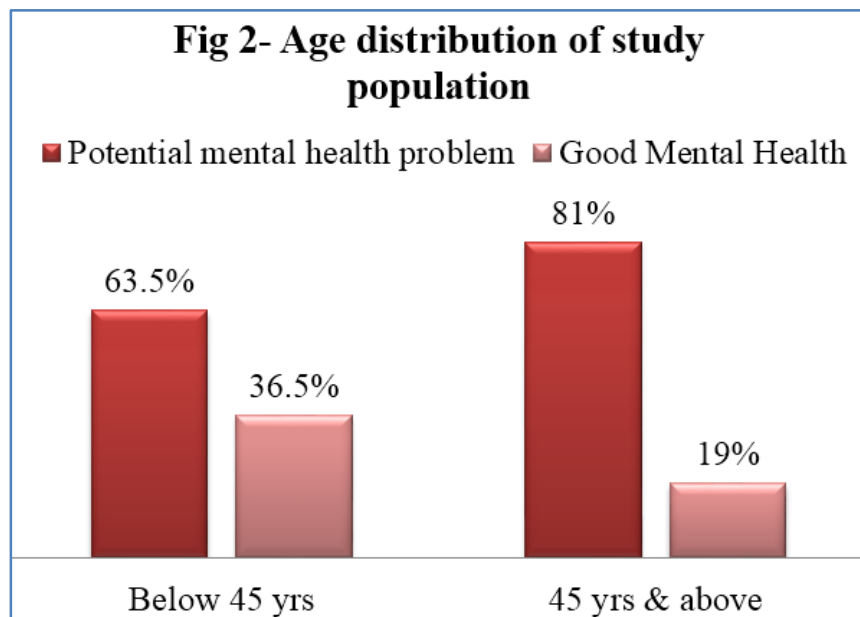
Married women were more commonly involved when compared to unmarried women. The association between marital status and mental health status was highly significant (p<0.001) (Table 1).

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Marital Status	Potential Mental Health problem	Good Mental Health	Total
Married women	259(71.9%)	101(28.1%)	360(100%)
Unmarried women	35(43.8%)	45(56.2%)	80(100%)
Total	**294(66.8%)**	**146(33.2%)**	**440(100%)**
Table 1: Marital status versus mental health			

Chi-square = 23.467, p<0.001, highly significant.

Among total 440 subjects, 191 subjects were of lower or upper lower class of socio-economic status; 150 out of these 191 subjects (78.5%) have potential mental health problem (Table 2)

Socio-economic status was found to be highly significantly associated with mental health status (p<0.001).

Socio economic Status	Potential Mental Health problem	Good Mental Health	Total
Lower/upper lower	150(78.5%)	41(21.5%)	191(100%)
Others	144(57.8%)	105(42.2%)	249(100%)
Total	**294(66.8%)**	**146(33.2%)**	**440(100%)**
Table 2: Socio-Economic Status versus Mental health			

Chi-square =20.894, p<0.001, highly significant.

Coming to the occupational status of women, housewives(74.7%) are at higher risk of mental health problems when compared to working women(60.6%) and statistically significant association (p<0.05) was found between mental health status and occupational status (housewives). (Table 3).
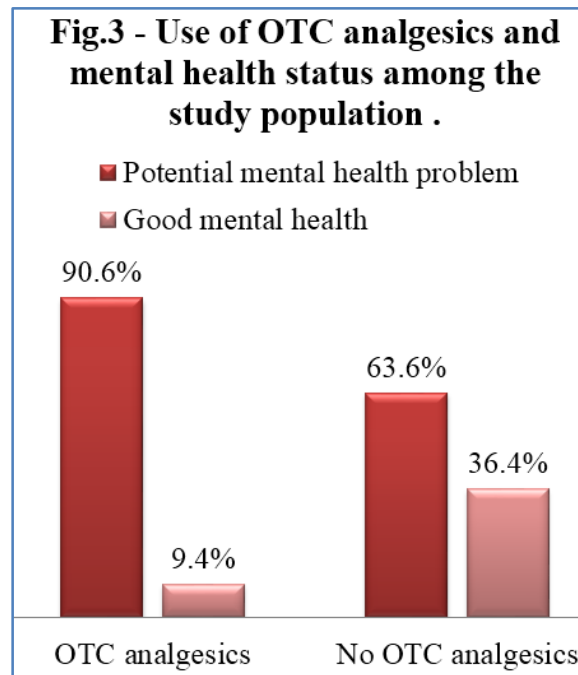
Occupation	Potential Mental Health Problem	Good Mental Health	Total
Housewives	145(74.7%)	49(25.3%)	194(100%)
Working women	149(60.6%)	97(39.4%)	246(100%)
Total	**294(66.8%)**	**146(33.2%)**	**440(100%)**
Table 3: Occupation versus Mental health			

Chi-square = 9.827, p<0.05, significant.

Among the total subjects of 440, 53 subjects were using over-the-counter analgesics, among them majority (90.6%) of them were estimated to have potential mental health problems and this finding is highly significant (p<0.001). (Fig. 3).

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Fig.3 - Use of OTC analgesics and mental health status among the study population .

Around 385 out of 440 subjects of the study population, do not practice any physical exercise apart from their routine work; among them, 264(68.6%) subjects, have potential mental health problem and this finding is statistically significant (p<0.05). (Table 4).

| Physical Activity	Potential Mental Health Problem	Good Mental Health	Total
Yes	30(54.5%)	25(45.5%)	55(100%)
No	264(68.6%)	121(31.4%)	385(100%)
Total	**294(66.8%)**	**146(33.2%)**	**440(100%)**
Table 4: Physical activity versus mental health			

Chi square= 4.27, p< 0.05, significant.

Around 180 out of 440 subjects (40.9%) were found to have clinical pallor, among them, 146 subjects (81.1%) have potential mental health problem. The association between clinical pallor and mental health status was statistically highly significant (p<0.001). (Table 5, Fig. 4).

Pallor	Potential Mental Health Problem	Good Mental Health	Total
Present	146(81.1%)	34(18.9%)	180(100%)
Absent	148(56.9%)	112(43.1%)	260(100%)
Total	294(66.8%)	146(33.2%)	440(100%)
Table 5: Clinical Pallor versus Mental health			

Chi square = 28.067, p<0.001, highly significant.

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Fig. 4- Clinical pallor and mental health status of adult women
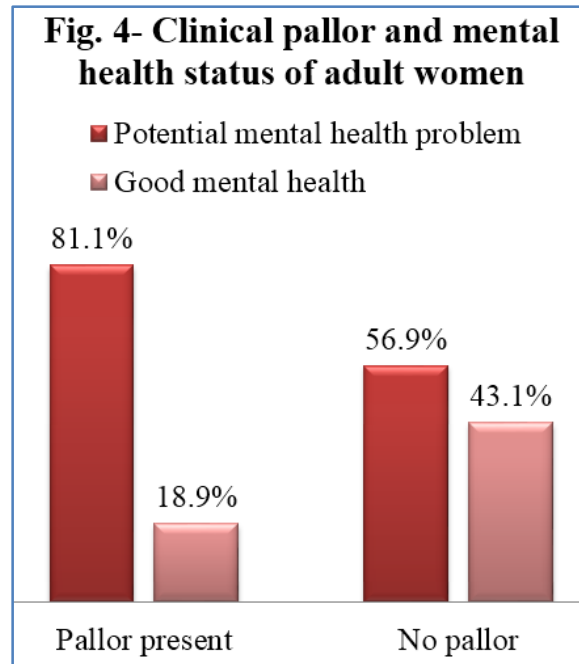
Body-mass index was one more important variable, especially underweight women (BMI<18) were at higher risk of mental health problems; 15 out of 440 subjects were underweight. There was significant (p<0.05) association found between BMI and mental health status of adult women. (Table 6).

Body Mass Index (BMI)	Potential Mental Health Problem	Good Mental Health	Total
Overweight(23-24.9)& Obesity(>=25)	186(61.6%)	116(38.4%)	302(100%)
Underweight (<18)	14(93.3%)	1(6.7%)	15(100%)
Normal BMI (18-22.9)	94(76.4%)	29(23.6%)	123(100%)
Total	**294(66.8%)**	**146(33.2%)**	**440(100%)**
Table 6: Body Mass Index (BMI) versus mental health

Chi square = 13.6, p<0.05, significant.

The following factors were not significantly associated (p>0.05) with mental health status of adult women:
- Subjective insufficiency of income.
- Age at marriage.
- No. of children.
- Average birth spacing.
- Watching TV.
- Duration of sleep at night.
- Substance abuse (Tobacco/alcohol/toddy).

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Further observations in the present study were that, around 106(36.1%) subjects out of 294 subjects who have potential mental health problem are from rural background.

Gynecological disorder (Leucorrhoea, Dysmenorrheal, Menstrual irregulaties, Dysfunctional uterine bleeding etc) is present in around 87(29.6%) subjects out of 294 subjects who have potential mental health problem.

DISCUSSION: Prevalence of potential mental health problem in adult women in urban slums of Hyderabad is 66.8% in the present study, which was comparable to prevalence of psychiatry morbidity (63.8%) in Ajay KT et al study conducted at Manipal.[5]

Adult women of age group 45 yrs and above were found to be at greater risk when compared to below 45 yrs of age group, comparable to Shuba Kumar et al study conducted in urban slums of 7 states in India and Barua A et al study conducted in Karnataka state.[3,4]

Similarly, Low socio-economic status women, unmarried and unemployed housewives did not report better mental health in the present study which is coinciding with findings of Barua A et al and Williams JS et al studies.[4,11]

Use of Over-The-Counter (OTC) analgesics was associated with poor mental health status of women in the present study which is coinciding with findings ofChambers C et al study i.e. presence of chronic disease and presence of drug use problem were important risk factors for poor mental health status.[12]

CONCLUSIONS: The burden of potential mental health problem is very high in adult women of urban slums of Hyderabad. The significant determinants of mental health status of adult women are age above 45 yrs (Menopausal age), being ever married, Low socio-economic status, being unemployed/ housewives, use of OTC analgesics, physical inactivity, clinical pallor and malnutrition (Underweight)

RECOMMENDATIONS: Women in menopausal age need social support and counseling to improve health seeking behavior and also to reduce stigma regarding mental illnesses. Women self-help groups can improve the employment opportunities and economic status of women in the community. Underweight women and those with clinical pallor should be identified and linked to community health workers for nutrition education and follow-up.

Mental health is one the neglected fields in India despite high prevalence of psychiatry morbidity; there is an emergency for formulating Government policies and implementing them as soon as possible.

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AUTHORS:
1. Kiran Mai B.
2. K. Srinivasan
3. Niharika B.
4. SindhuPriya

PARTICULARS OF CONTRIBUTORS:
1. Associate Professor, Department of Community Medicine, Gandhi Medical College, Secunderabad.
2. In-charge Professor, Department of Community Medicine, Government Medical College, Anantapuramu.
3. Senior Resident, Department of Community Medicine, Government Medical College, Anantapuramu.
4. House Surgeon, Gandhi Medical College, Secunderabad.

NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:
Dr. Niharika B,
S2, Block I, Medical College
Teaching Staff, Residential Quarters,
Beside Power Office, Jesus Nagar,
Anantapuramu-515001, A. P.
E-mail: dr.niharika2008@gmail.com