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Original Research Article

Psychological distress among adult urban population of Puducherry

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ABSTRACT

Background: A large proportion of population in the community with psychological distress goes unnoticed. This study was done to assess the psychological distress among adult population of an urban area of Puducherry.
Methods: The study was conducted among 569 individuals of age 18 years and above. Systematic random sampling method was used to select the households in the study area and from each household one adult was randomly selected. The General Health Questionnaire-12 (GHQ-12) was used to assess the psychological distress among the study participants.
Results: Majority of the participants had low psychological distress (60.5%) followed by typical (19.3%), more than typical (10%), evidence of psychological distress (6.2%) & severe distress (4%). One-fifth (20.2%) of the participants had psychological distress which needs attention. The mental health status of the participants was significantly associated with the age, sex, marital status, religion and education ($p<0.05$).
Conclusions: The psychological distress is a major public health problem in the study population. Focused interventions to improve the mental health of population are required to decrease the mental distress in the community.

Keywords: Psychological, Distress, Mental health, GHQ-12, Community

INTRODUCTION

World Health Organization (WHO) definition of health includes mental wellbeing as a component along with physical and social wellbeing.[1] Mental disorders are estimated to account for 14% of all disability adjusted life years (DALY's) lost to disease throughout the globe and these also contribute more to the burden of disease than either cardiovascular disease or cancer worldwide.[2,3]

According to estimates, 12% of the burden of total diseases are due to mental disorders worldwide and this is expected to increase to 15% by 2020.[4] In India, approximately 6% of the population have some mental disorder at any point of time.[5] According to a study in Mumbai slum, 28% of patients aged >18 years suffered from psychiatric problems.[6] Mental disorders, in general, which are responsible for increasing costs of medical care and loss of productivity every year, don't get the same attention, like physical illnesses. Presently, the identification of Common Mental Disorders (CMD) among the people in community or attending primary health centers is extremely inadequate.[7] Also, the identification of CMD among the people in a community is more difficult than the people attending the health centers. The WHO has called for the integration of mental health into primary health care (PHC) as a step towards closing gap in treatment.[8]

Psychological distress is a general term used to describe unpleasant feelings or emotions that impact your level of functioning. Serious psychological distress is a precursor

to serious mental illness like depression and anxiety disorders. A large proportion of population in the community with psychological distress goes unnoticed and primary health care providers could have a key role to play in the detection of risk of mental disorders in community. This study was done to assess the psychological distress among adult population of an urban area of Puducherry, India.

METHODS

This community based cross-sectional study was conducted in the urban field practice area of Department of Community Medicine of a Tertiary Heath Care Institute at Puducherry. The study area comprises of a population of about twelve thousand.

Sample size and sampling

The sample size for the study was calculated as 525 by assuming the prevalence of psychological distress as 28%[6] and relative precision of 14% with 95% confidence interval to find the prevalence of psychological distress in the study population. A house to house survey was conducted and list of all the households in the study area were prepared. Using systematic random sampling method, 600 households were selected and from each household one adult was randomly selected. Pregnant women and disabled were excluded from the study. After providing participant information sheet (in local language) and explaining about the study purpose and procedures, informed written consent was obtained from all the subjects.

Data collection and quality assurance

This study was done during the month of February 2013 as part of imparting hands on training in community based research to MBBS final year (Part I) students under the guidance and supervision of interns, postgraduate students and faculty from Department of Community Medicine. All the students were given training in research methodology and data collection including taking informed consent, administering questionnaire, interview techniques, and proper physical measurements. Random checks for 10% of the completed proformas were done by the faculty.

Measurements

General Health Questionnaire - 12 (GHQ - 12) was used as the tool for assessment of psychological distress. The GHQ-12 is a well–known and commonly used measuring tool for psychological wellbeing with high validity and is not influenced by gender, age or educational level. Either the bimodal method or a Likert scoring system is used for the scoring of GHQ-12. For the assessment of psychological distress, we used a five categories Likert Scoring System with a score range of 0–36. The interpretation of the five categories Likert score is described in the Table 1.[9]

Table 1: Likert scoring system for GHQ–12.[9]

Score	Psychological distress
1–10	Low psychological distress
11–12	Typical
13–15	More than typical
16–20	Evidence of psychological distress
>20	Severe distress

Statistical analysis

Data were entered in Microsoft excel spread sheet 2010 (Microsoft Corporation) and data cleaning was done. Statistical Package for Social Sciences (SPSS) for a windows version 19.0 (Armonk, NY: IBM Corp.) was used for the analyses. Chi-square test was applied to assess the association between categorical data and p value of <0.05 was considered as statistically significant.

RESULTS

Sociodemographic characteristics

Table 2: Socio-demographic characteristic of study participants (n=569).

Characteristic		Number	%
Age (in years)	18-30	148	26.0
	30-40	142	25.0
	40-50	102	17.9
	50-60	87	15.3
	60 & above	90	15.8
Sex	Female	274	48.2
	Male	295	51.8
Marital status	Married	447	78.6
	Unmarried	88	15.5
	Widow	31	5.4
	Divorced	3	0.5
Religion	Hindu	537	94.4
	Muslim	6	1.1
	Sikh	1	0.2
	Christian	23	4.0
	Jain	2	0.4
Education	Graduate and above	124	21.8
	Secondary school	130	22.8
	High school	196	34.4
	Primary	52	9.1
	Illiterate	67	11.8
Employment	Employed	233	40.9
	Student	28	4.9
	Home maker	225	39.5
	Retired	37	6.5
	Unemployed	46	8.1
Monthly income (INR)	<3,000	125	22.0
	3,001-10,000	317	55.7
	>10,000	127	22.3

Among the 600 households selected for the study, participants from 569 households were participated & interviewed, participant response rate was 95%. Maximum numbers of participants (26%) were aged 18 to 30 years, followed by 30 to 40 years (25%). Majority of the participants were males (51.8%), married (78.6%), belonged to Hindu religion (94.4%). About 12% respondents were illiterate, 8.1% were unemployed and 22% had monthly income below 3000 INR. The details of the socio-demographic characteristics of the study population are described in Table 2.

Table 3: Distribution of study participants based on the psychological distress.

Psychological distress	Score	Number	Percentage (%)
Low psychological distress	1–10	344	60.5
Typical	11–12	110	19.3
More than typical	13–15	57	10.0
Evidence of psychological distress	16–20	35	6.2
Severe distress	>20	23	4.0
Total		569	100

Table 4: Association between socio-demographic characteristics and psychological distress (n=569).

Characteristic		Low psychological distress (n=344)	Typical (n=110)	More than typical (n=57)	Evidence of psychological distress (n=35)	Severe distress (n=23)	Total	P value
Age (in years)	18-30	104	22	11	9	2	148	0.001
	30-40	89	27	15	8	3	142	
	40-50	66	22	8	4	2	102	
	50-60	42	25	13	3	4	87	
	60 & above	43	14	10	11	12	90	
Gender	Female	156	47	25	25	21	274	0.001
	Male	188	63	32	10	2	295	
Marital Status	Married	266	91	46	30	14	447	0.004
	Unmarried	64	13	4	3	4	88	
	Widow	14	5	6	2	4	31	
	Divorced	0	1	1	0	1	3	
Religion	Hindu	334	107	53	29	15	538	0.002
	Muslim	2	0	2	1	1	6	
	Sikh	0	1	0	0	0	1	
	Christian	7	2	2	5	6	22	
	Jain	1	0	0	0	1	2	
Education	Graduate and above	91	19	8	4	2	124	0.001
	Secondary school	79	27	13	6	5	130	
	High school	111	41	21	14	9	196	
	Primary school	25	13	8	4	2	52	
	Illiterate	38	10	7	7	5	67	
Employment	Employed	138	51	28	8	8	233	0.244
	Student	21	4	1	2	0	28	
	Home maker	138	38	20	17	12	225	
	Retired	21	8	4	2	2	37	
	Unemployed	26	9	4	6	1	46	
Monthly Income (INR)	<3,000	70	23	13	16	4	126	0.192
	3,001-10,000	194	23	34	13	12	317	
	>10,000	80	23	10	6	7	126	
Family type	Nuclear	253	82	42	27	13	417	0.335
	Joint	88	27	14	8	9	146	
	Single Member	3	1	1		1	6	

Psychological distress

The different levels of psychological distress i.e. low, typical, more than typical psychological distress was observed among 60.5%, 19.3% and 10.0% participants respectively. Thirty five (6.2%) and 23 (4.0%) participants had evidence of psychological distress and severe distress respectively (Table 3).

In our study majority of respondents (60.5%) had low psychological distress, 19.3% respondents had typical psychological distress and 20.2% respondents had more severe form of psychological distress ranging from more than typical to severe distress.

Table 4 shows the association between different socio-demographic characteristics and psychological distress. The factors like age, sex, marital status, religion and education were significantly associated with the psychological distress ($p<0.05$).

DISCUSSION

In the present study, 19.3% of participants had typical psychological distress whereas 10%, 6.2% and 4% of the participants had more than typical distress, evidence of psychological distress and severe distress respectively. In a study conducted among 152 medical students in Ahmedabad to assess their mental health status, the prevalence of distress (described as "case-ness") among the medical students was found to be 23.7% where a cutoff of 3 was used to describe the cases.[10] In the present study the psychological distress above the typical (more than typical, evidence of psychological distress, severe distress) was observed in 20.2% participants. The high prevalence among medical students as compared to the present study may be due to the specific professional participants or due to different method of assessment of the GHQ-12.

Devis et al conducted a study in New Zealand among patients attending primary health care. They used Bi-modal method for assessing the scores of GHQ-12 with a cut-off of 2/3 for 'caseness' - means having some form of psychological distress. In that study, 33% of participants had some form of psychological distress, the proportion was higher than our study because the present study was conducted in a community and the above mentioned study in a tertiary center, patients suffering from different disease and attending a tertiary health center might be experiencing some form of psychological distress.

In s study conducted by Doherty DT et al in Ireland among adults using Bimodal method of assessment for GHQ-12 score and taking cut off of 4 (Score more than or equal to 4 was defined as "case") the proportion of 'cases' in the study was 12.3%.[11] Our study has shown slightly higher prevalence (20.2%).

In another study to assess the psychological health among Malaysian College Students aged between 18 to 32 years, using GHQ-12 questionnaire with a cut off score of 6, 47.1% of students obtained scores 6 and higher (psychological distress).[12] Whereas, in present study with 5 categories Likert scale assessment of scores ranges from 0 to 36, 20.2% of participants had higher level of psychological distress. Similarly, in a study among Spanish population for the Reliability, external validity and factor structure of 12-Item General Health Questionnaire (GHQ-12). In that study, there was a significant difference in the mean scores of men (7.34±5.05) and women (9.30±5.45).[13]

A number of different scales can be used for the scores of GHQ -12. In present study we used the 5 categories Likert scale system for the assessment of scores, but in some of the studies bimodal method was used. But the interpretation of psychological distress is almost same irrespective of the method of scoring system. We have attempted to compare the results of different studies to find out the difference in prevalence of psychological distress among different study participants.

CONCLUSION

One fifth (20.2%) of the study participants reported that they experienced significant psychological distress. The level of psychological distress among the study participants was significantly associated with their age, gender, marital status and education level. Detailed studies to find out the causes of the psychological distress among the study participant and community level intervention to increase the awareness regarding the ill effect of psychological distress are recommend.

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