Original Article

Screening for Psychological Distress among Outpatient Attendees at a Rural Health Center in Goa, India, Using World Health Organization Self-Reporting Questionnaire-20 Scale: A Cross-sectional Study

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Abstract

Introduction: Psychological distress has been defined as a state of emotional suffering with predominant symptoms of depression and anxiety. Given the state of poor awareness of psychological morbidities in general population, the associated stigma as well as the lack of training among primary health-care professionals in identifying psychological morbidities has led to poor detection rates. We therefore conducted this study to estimate the psychological distress among outpatient department attendees at a rural health center in Goa, using the World Health Organization Self-Reporting Questionnaire (WHO-SRQ)-20 screening questionnaire and to identify some associated factors. **Methodology:** A hospital-based cross-sectional study was conducted in a rural area. Systematic sampling technique was used to include 300 study participants aged 18 years and above. Psychological distress was measured using the 20-point WHO-SRQ. Those identified as having psychological distress were reconfirmed by the Hamilton Depression Rating Scale (HAM-D) under supervision by a trained psychiatrist. Data were later entered into Google Sheets and analyzed using IBM-SPSS 24. **Results:** Around 7.7% of the participants had psychological distress. Female sex, marital status, education level, type of family, and alcohol use were significantly associated with psychological distress. Confirmation of diagnosis by the HAM-D indicated 21 of the 23 participants identified by WHO-SRQ had definitive psychological distress. **Conclusion:** WHO-SRQ is a simple screening tool which can be routinely used to effectively screen for psychiatric morbidities at primary care level.

Keywords: *Cross-sectional studies, distress, primary care, psychological, screening, World Health Organization Self-Reporting Questionnaire*

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Introduction

The World Health Organization (WHO) defines health as a state of complete physical, mental, and social well-being and not merely an absence of disease or infirmity.[1] The WHO further defines mental health as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, and is able to contribute to his or her community.[2] Psychological distress has been defined as a state of emotional suffering with predominant symptoms of depression and anxiety.[3]

Mental health is being recognized as one of the priority areas in health policies around the world and also finds place in the sustainable development goals.[4] Psychological disorders are among the leading causes of nonfatal disease burden in India and the contribution of mental disorders to the total disability-adjusted life years in India increased from 2.5% in 1990 to 4.7% in 2017.[5] Given the state poor of awareness of psychological morbidities in general population, the stigma associated[6] as well as the lack of training among primary health-care (PHC) professionals in identifying psychological morbidities has led to poor detection rates.[7]

Findings from previous studies show a prevalence of psychological distress exceeding 30% in adults attending general outpatient medical clinics.[8] Screening of psychological distress using simple tools may help in early identification, prompt referral, and successful management of the psychiatric morbidity. Hence, we conducted this study to estimate the psychological distress among outpatient

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department (OPD) attendees at a rural health center in Goa, India, using the screening tool WHO Self-Reporting Questionnaire (SRQ)-20 questionnaire.[9]

Methodology

Study design and study duration: A cross-sectional study design was conducted for six months duration.

Study population: The study was conducted among patients attending the OPD, at a rural health center, in Goa, India.

Inclusion criteria

Patients more than 18 years of age and attending the OPD at the health center were recruited in the study. An individual was recruited only once in the study irrespective of number of OPD visits made by that individual during the study period.

Exclusion criteria

Patients reporting preexisting psychiatric morbidities and patients attending the special psychiatry OPD were excluded.

Sample size and sampling technique

Sample size was calculated using the formula for proportion in cross-sectional studies: Sample size n = [DEFF*Np (1-p)]/[$(d^2/Z^2_{1-\alpha/2}\times (N-1)+p\times(1-p)$], where population size (for finite population correction factor or fpc) (N) = 3000, hypothesized % frequency of outcome factor in the population (p) = 30% (from previous study),[4] absolute precision (d) = 5%, Confidence level ($Z^2_{1-\alpha/2}$) = 95%, and design effect (DEFF) = 1. The calculated sample size was 292, and considering 10% nonresponse, the sample size was 325. Systematic sampling technique was the sampling strategy used to recruit the study participants.

Data collection and study tools

The data were collected by interviewing the study participants using a structured questionnaire. Demographic and personal details were collected from the participants. Psychological distress was measured using the 20-point WHO-SRQ.[9] The WHO-SRQ 20 uses recall of past 30 days only and is best suited to study the stated objectives of the study. A cutoff score of 8 was used to identify psychological distress. A score of 8 has sensitivity of 79%, specificity of 96%, and positive predictive value of 75%.[10] Participants who had a SRQ-20 score of 8 and above were revaluated using Hamilton Depression Rating Scale (HAM-D)[11,12] and then referred to a psychiatrist for further management.

Ethics approval and human participant protection

Ethics approval for the study was obtained from the Institutional Ethics Committee of the Institute (ID No.GMCIEC/2022/2). Written informed consent was obtained from all the participants recruited in the study. Participation in the study was voluntary and data were kept strictly confidential.

Statistical analysis

Statistical analysis was conducted using IBM-SPSS statistical software 24.0 (Armonk, NY: IBM Corp) trial version. Continuous variables were presented as mean and standard deviation. For categorical variables, the percentages were calculated. Psychological distress was the dependent variable. Association between psychological distress and variables of interest was studied and tested by Chi-square test of significance.

Results

A total of 300 adults were recruited for the study. Table 1 shows background characteristics of the study participants. Of the total 300 study participants, 55% of them were in the age group of 40–60 years. The mean age of study participants was 55 years. Majority of participants were female, 183 (61%), while 117 (39%) were male. 228 (76%) of them were married, while 60 (20%) were widow and 12 (4%) were unmarried. 231 (77%) of them were from nuclear family, while 60 (20%) were from three generation family and 9 (3%) were from joint family. Most of the study participants had completed high school education, 101 (33.7%), followed by middle school 62 (20.7%), primary school 57 (19%), and graduation 19 (6.3%), whereas 61 (20.3%) were illiterate. However, more than half of the study participants, 85 (53.13%),

Table 1: Background characteristics of the study participants

Background characteristics	*n*=300, *n* (%)
Age (years), mean±SD	55.32±12.62
Sex	
Male	117 (39.0)
Female	183 (61.0)
Religion	
Hindu	194 (64.7)
Christian	103 (34.3)
Muslim	3 (1.0)
Marital status	
Married	228 (76.0)
Unmarried	11 (3.7)
Widowed	61 (20.3)
Type of family	
Nuclear	231 (77.0)
Second generation	59 (19.7)
Joint	10 (3.3)
Educational status	
Illiterate	61 (20.3)
Primary I–IV	57 (19.0)
Middle school V–VII	62 (20.7)
High school VIII–X	101 (33.7)
Higher secondary (XI–XII) and above	19 (6.3)

SD=Standard deviation

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were unemployed, while 45 (28.13%) worked in a private company, 16 (10%) were government employees, and 14 (8.75%) had their own business.

The SRQ-20 score of the participants is shown in Table 2. Very few, 23 (7.7%), patients were diagnosed with psychological distress. The mean score was 1.74 ± 2.95, while the score ranged between 0 and 15. The mean score was higher among females (2.10 ± 3.41) compared to males (1.16 ± 1.90) and this difference was statistically significant ($P = 0.007$).

Females had higher proportion of psychological distress (10.9%) compared to males (2.6%). This difference was significant ($\chi^2 = 7.05$, $P = 0.008$). There was a statistically significant association between education and psychological distress ($\chi^2 = 25.09$, $P = 0.000$) as well as between marital status and psychological distress ($\chi^2 = 12.03$, $P = 0.002$) [Table 3].

There was no significant association of psychological distress with socioeconomic class, occupation, age, religion, and tobacco use.

Confirmation of diagnosis by the HAM-D indicated 21 of the 23 participants (91.3%) detected by the WHO-SRQ had definitive psychological distress. All 21 of the study participants who were diagnosed by the WHO-SRQ 20 were found to have mild depression according to HAM-D scale.

The most common presenting symptoms were crying episodes/sad mood and somatic complaints. Other presenting complaints included lack of interest, loss of appetite, decreased concentration, low self-esteem, poor interpersonal relationships, irritability, and anger outbursts.

Discussion

In the present study, psychological distress has been defined as depressive disorders including phobias, panic disorders, obsessive compulsive disorders, somatoform disorders, and anxiety depressive disorders. This being a two-stage screening is likely to result in a more accurate provisional diagnosis compared to studies which defined psychological distress based on single screening questionnaire. In our study, we observed that most of the participants were in the age group of 40–60 years, females, married, Hindu, from nuclear family, completed high school, and unemployed.

Table 2: Psychological distress among the study participants by World Health Organization Self-Reporting Questionnaire scale with cutoff score of 8

Psychological distress	*n*=300, *n* (%)
Present (SRQ score ≥8)	23 (7.7)
Absent (SRQ score <8)	277 (92.3)
Mean score±SD	1.74±2.95
Score range	0–15
Mean score±SD for males	1.16±1.90
Mean score±SD for females	2.10±3.41
Student's *t*-test value, df	2.73, 298
P	0.007

SD: Standard deviation, SRQ=Self-Reporting Questionnaire

The present study shows proportion of psychological distress of around 7.7%. This estimate was comparable to some studies,[13-15] but lower than others.[16,17] The dynamic nature of mental disorders in general plays a major role in these variations.

In the present study, a significant association of psychological distress was seen with gender, with 6 times higher rates among females. Other studies in India[18-21] and globally[22-25] have found gender to be a significant associated factor with females tending to have a higher prevalence particularly of depression and other affective disorders than males, a finding similar to the present study. Patel and Kleinman[26] argue that apart from the possible role of biological factors, it is plausible that gender factors, i.e., the considerable stresses faced by women may also play a role. In many developing societies, women bear the brunt of the adversities associated with poverty, i.e. less access to school, physical abuse from husbands, forced marriages, and fewer job opportunities, and in some societies, limitation of their participation in activities outside the home.

Our study found that education was a significant factor contributing to psychological distress. Illiterates and primary school educated individuals had significantly higher rates of psychological distress. This association of psychological distress with education is well known and has been demonstrated in other studies.[22,27] Patel and Kleinman[26] stated that the relationship between low educational level and mental disorders may be confounded or explained by several pathways: these include malnutrition, which impairs intellectual development, leading to poor educational performance and poor psychosocial development. Furthermore, the social consequences of poor education are obvious: lack of education represents a diminished opportunity for persons to access resources to improve their situation. Fryers *et al*.[28] in their systematic review to study social inequalities and common mental disorders (CMDs) in Europe found that education emerges strongly as a useful indicator for CMDs and suggested focusing more on education indicator, to identify vulnerable groups for preventive action.

The third significant factor for psychological distress that emerged in the present study was marital status, with separated/divorced/widowed individuals having a higher proportion of psychological distress. This association has been found in many other studies as well.[15,17]

Limitation of the study

Since it is a hospital-based study, it does not give the true picture of psychological distress in the general population.

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Table 3: Factors associated with psychological distress

Associated factors	Psychological distress			χ^2, *P*
	Present (*n*=23) SRQ score ≥8, *n* (%)	Absent (*n*=277) SRQ score <8, *n* (%)	Total (*n*=300), *n* (%)	
Sex				
Female	20 (10.9)	163 (89.1)	117 (100)	7.05, 0.008
Male	3 (2.6)	114 (97.4)	183 (100)	
Religion				
Hindu	15 (7.7)	179 (92.3)	194 (100)	0.252, 0.882
Christian	8 (7.8)	95 (92.2)	103 (100)	
Muslim	0	3 (100)	3 (100)	
Education level				
Illiterate	9 (14.8)	52 (85.2)	61 (100)	25.095, 0.000
Primary	11 (19.3)	46 (80.7)	57 (100)	
Middle	0	62 (100)	62 (100)	
High school	3 (3.0)	98 (97.0)	101 (100)	
Higher secondary	0	19 (100)	19 (100)	
Marital status				
Married	12 (5.3)	216 (94.7)	228 (100)	12.034, 0.002
Unmarried	0	11 (100)	11 (100)	
Widowed/separated	11 (18.0)	50 (82.0)	61 (100)	

SRQ=Self-Reporting Questionnaire

The WHO-SRQ 20 instrument checks the distress based on questions on the participants' experiences for the past 30 days only.

Conclusion

Proportion of psychological distress was low at 7.7%. Being a female, staying separated/divorced/widowed individuals, poor education (primary and illiterate), type of family, and alcohol use were some of the significant factors for psychological distress. The WHO-SRQ 20 is a valid and reliable instrument which has the ability to detect cases of CMDs in cost-effective manner. Since WHO-SRQ 20 is easy to administer using simple terminology and yes/no structure, the use of this scale is recommended for screening probable CMDs in PHC settings and community level. Planning for community mental health services at a health center level should include initial screening at community level for psychological distress by trained health workers using standardized scales like the WHO-SRQ 20.

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Conflicts of interest

There are no conflicts of interest.

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