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***Research Article***

# PREVALENCE OF MENTAL DISTRESS AMONG MEDICAL STUDENTS OF A PRIVATE COLLEGE IN SOUTH KARNATAKA

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## ABSTRACT
Around 20% of the world's children and adolescents have mental disorders or problems.There are many reasons for mental ill health among which medical profession is one such field which is often neglected.Thus the present study was conducted to determine the prevalence of mental distress among medical students of a private college. A cross sectional, questionnaire based study conducted among medical students of a private college for a period of 4 months using self-reporting questionnaire (SRQ) developed by WHO. 478 (96.9%) of 493 participated in the study. The prevalence of mental distress was 32.2% using 10 as cut off value. The highest level of prevalence was found in female gender (18.4%), 1$^{st}$year students (14.4%) and 18 years of age (25.9%). The level of mental distress varied between the genders, stages of education and age.Thehigh prevalence of mental distress in medical students calls for early detection, intervention and support.

***Keywords:*** *Karnataka, Medical students, Mental distress, Prevalence*

## INTRODUCTION
Mental health is defined as a "state of wellbeing in which every individual realizes his or her potential, can cope with the normal stresses of life, can work productively and fruitfully and is able to make a contribution to his or her community" (WHO, 2014).

Mental disorders are often been neglected because of its non-specificity in diagnosis, indefinite clinical presentations, long term and varied treatment, various myths and belief systems associated with social stigma (Kishore, 2014). Around 20% of the world's children and adolescents have mental disorders or problems (WHO). There are many reasons for mental ill health among which medical professionis onesuch field which is often neglected.

Medical profession is one of the top professional courses chosen because of its esteemed place and financial security in the Indian society. Students enter into the medical field due to many reasons – to fulfil their own dreams, parent's pressure, job and financial security, prestigious position etc. The days have changed where only meritorious students choose the medical profession.

The students after joining the course may be burdened with the vast syllabus, competition, new studying environment, fear of failure, inability to cope with the high expectations of parents and peers which may have a negative impact on the academic performance, physical and mental health leading to sleep deprivation, impaired judgment, reduced concentration, lack of confidence in handling patients, loss of self-esteem,anxiety, depression, interpersonal conflict, substance abuse, suicidal attempts etc (Manjunath and Kulkarni, 2013; Thangaraj and D'souza, 2014; Manjunath *et al.*, 2014; Abraham *et al.*, 2009; Baldwin *et al.*, 1991).

It becomes necessary for the students to have a good knowledge of mental health problems, their early symptoms, the most effective options for treatment and services when required. Therefore, it was considered to deal with the mental health issues of the medical students as early detection and intervention may help in preventing and minimizing the effects of distress and help the students to deliver the best comprehensive care to the patients in the future.

### *Objective*
1. To determine the prevalence of mental distress among medical students of a private college.

## MATERIALS AND METHODS

### *Methodology*

This is a cross sectional, questionnaire based study conducted on all medical students of a private college in South Karnataka for a period of 4 months (Jan 2015 to April 2015). The prevalence of mental distress was measured using a self-reporting questionnaire (SRQ) developed by WHO which consisted of 20 questions with a reference period of the preceding 30 days (WHO, 1994). The questionnaire is specially designed to screen the psychiatric disturbances in developing countries. The questionnaire had questions related to cognitive symptoms, anxiety, depression and somatic symptoms.

All the medical students of a private college were included as study subjects. The purpose of the study was explained and oral consent was obtained from the participants before enrolling them in the study. The students who consented to participate were administered the WHO SRQ20Questionnaire. The total strength of the medical college was 493, of which 478 (96.9%) participated in the study.English version of self –reporting questionnaire (SRQ20) was administered to the study subjects checking that there was no discussion among them while filling the questionnaire. Confidentiality of the data was strictly maintained. Two visits were made to each class to ensure full coverage. Those who didn't give consent to participate and were absent for the two visits (n=15) were excluded from the study.

***Data Analysis:*** Data was entered into Microsoft excel sheet and analysed with SPSS 21 version.The outcome variable of questions related to stress was categorized dichotomously as yes/no. Descriptive statistics such as frequency, percentage was applied for general characteristics, prevalence of stress. Analytical statistics such as Chi-square Test and odds ratio were used to determine and quantify the association between various study variables and presence of stress respectively. Multiple logistic regression was used for identifying the independent risk factors of stress. Testing of hypothesis was performed at 95% level of significance.

## RESULTS AND DISCUSSION

### *Results*

In the present study, a cut off value of 10 was taken to assess the prevalence of mental distress in the medical students. As per the user's guide to the SRQ, there was no generally applicable cut off recommended for the SRQ and the cut off value was depended on the type of study, the language used, the population under study (WHO, 1994). The prevalence of stress was found significant in early age group and during initial years of medical education (Table 1).

**Table 1: Prevalence, $x^2$and adjusted odds ratio of mental stress in the study subjects.**

| Study variable | Total number | Stress present | Stress absent | $x^2$ value | *p* value | OR (95% CI) |
|---|---|---|---|---|---|---|
| **Gender** | | | | | | |
| **Female** | 278 (58.2) | 88(18.4) | 190(39.7) | 0.96 | 0.756 | Ref |
| **Male** | 200 (41.8) | 66(13.8) | 134(28.0) | | | 1.03 (0.69-1.53) |
| **Age** | | | | | | |
| **18 years** | 124 (25.9) | 39(8.2) | 85(17.8) | | | Ref |
| **19 years** | 106 (22.2) | 50(10.5) | 56 (11.7) | 19.20 | 0.002 | 0.29(0.06-1.62) |
| **20 years** | 101 (21.1) | 33(6.9) | 68(14.2) | | | 0.71(0.14-3.54) |
| **21 years** | 91 (19.0) | 19(4.0) | 72(15.1) | | | 0.54(0.11-2.59) |
| **22 years** | 48 (10.0) | 10(2.1) | 38(7.9) | | | 0.44(0.09-2.12) |
| **23 years** | 8 (1.7) | 3(0.6) | 5(1.0) | | | 0.50(0.09-2.63) |
| **Year of study** | | | | | | |
| **1st year** | 178 (37.2) | 69(14.4) | 109(22.8) | | | Ref |
| **2nd year** | 154 (32.2) | 58(12.1) | 96(20.1) | 20.69 | <0.001 | 7.43(2.22-24.94) |
| **3rd year** | 96 (20.1) | 22(4.6) | 74(15.5) | | | 6.09(2.18-17.05) |
| **4th year** | 50 (10.5) | 5(1.0) | 45(9.4) | | | 2.83(099-8.11) |
| **Total** | **478** | **154(32.2)** | **324(67.8)** | | | |

The distribution of answer pattern is given in Table 2. Feeling unhappy, easily tired, finding difficult to enjoy daily activities, sleeping badly, headache, trouble in thinking clearly were the most common answers given by the medical students. The prevalence of mental distress of both male and female at different cut off values is pictorially represented in Figure 1

**Table 2: Distribution of answers on each of SRQ 20 questions**

| Sl no | Question | Answer- Yes | | | Answer – No | | |
|---|---|---|---|---|---|---|---|
| | | Male | Female | Total | Male | Female | Total |
| 1 | **Often headache** | 78 (16.3) | 131 (27.4) | 209 (43.7) | 122 (25.5) | 147 (30.8) | 269 (56.3) |
| 2 | **Poor appetite** | 57 (11.9) | 76 (15.9) | 133 (27.8) | 143 (29.9) | 202 (42.3) | 345 (72.2) |
| 3 | **Sleeping badly** | 94 (19.7) | 116 (24.3) | 210 (43.9) | 106 (22.2) | 162 (33.9) | 268 (56.1) |
| 4 | **Easily frightened** | 65 (13.6) | 120 (25.1) | 185 (38.7) | 135 (28.2) | 158 (33.1) | 293 (61.3) |
| 5 | **Hands shaking** | 47 (9.8) | 50 (10.1) | 97 (20.3) | 153 (32.0) | 228 (47.7) | 381 (79.7) |
| 6 | **Nervous, tense or worried** | 132 (27.6) | 203 (42.5) | 335 (70.1) | 68 (14.2) | 75 (15.7) | 143 (29.9) |
| 7 | **Poor digestion** | 44 (9.2) | 69 (14.4) | 113 (23.6) | 156 (32.6) | 209 (43.7) | 365 (76.4) |
| 8 | **Having trouble thinking clearly** | 97 (20.3) | 94 (19.7) | 191 (40.0) | 103 (21.5) | 184 (38.5) | 287 (60.0) |
| 9 | **Feeling unhappy** | 102 (21.3) | 151 (31.6) | 253 (52.9) | 98 (20.5) | 127 (26.6) | 225 (47.1) |
| 10 | **Crying more than usual** | 33 (6.9) | 82 (17.2) | 115 (24.1) | 167 (34.9) | 196 (41.0) | 363 (75.9) |
| 11 | **Finding difficult to enjoy daily activities** | 92 (19.2) | 113 (23.6) | 205 (42.9) | 108 (22.6) | 165 (34.5) | 273 (57.1) |
| 12 | **Finding difficult to make decisions** | 97 (20.3) | 149 (31.2) | 246 (51.5) | 103 (21.5) | 129 (27.0) | 232 (48.5) |
| 13 | **Daily work suffering** | 90 (18.8) | 103 (21.5) | 193 (40.4) | 110 (23.0) | 175 (36.6) | 285 (59.6) |
| 14 | **Unable to play a useful part in life** | 76 (15.9) | 93 (19.5) | 169 (35.4) | 124 (25.9) | 185 (38.7) | 309 (64.6) |
| 15 | **Lost interest in things** | 76 (15.9) | 109 (22.8) | 185 (38.7) | 124 (25.9) | 169 (35.4) | 293 (61.3) |
| 16 | **Feeling worthless person** | 36 (7.5) | 61 (12.8) | 97 (20.3) | 164 (34.3) | 217 (45.4) | 381 (79.7) |
| 17 | **Having thought of ending life** | 46 (9.6) | 68 (14.2) | 114 (23.8) | 154 (32.2) | 210 (43.9) | 364 (76.2) |
| 18 | **Feeling tired all the time** | 67 (14.0) | 99 (20.7) | 166 (34.7) | 133 (27.8) | 179 (37.4) | 312 (65.3) |
| 19 | **Having uncomfortable feelings in your stomach** | 32 (6.7) | 59 (12.3) | 91 (19.0) | 168 (35.2) | 219 (45.8) | 387 (81.0) |
| 20 | **Easily tired** | 85 (17.8) | 130 (27.2) | 215 (45.0) | 148 (31.0) | 115 (24.1) | 263 (55.0) |

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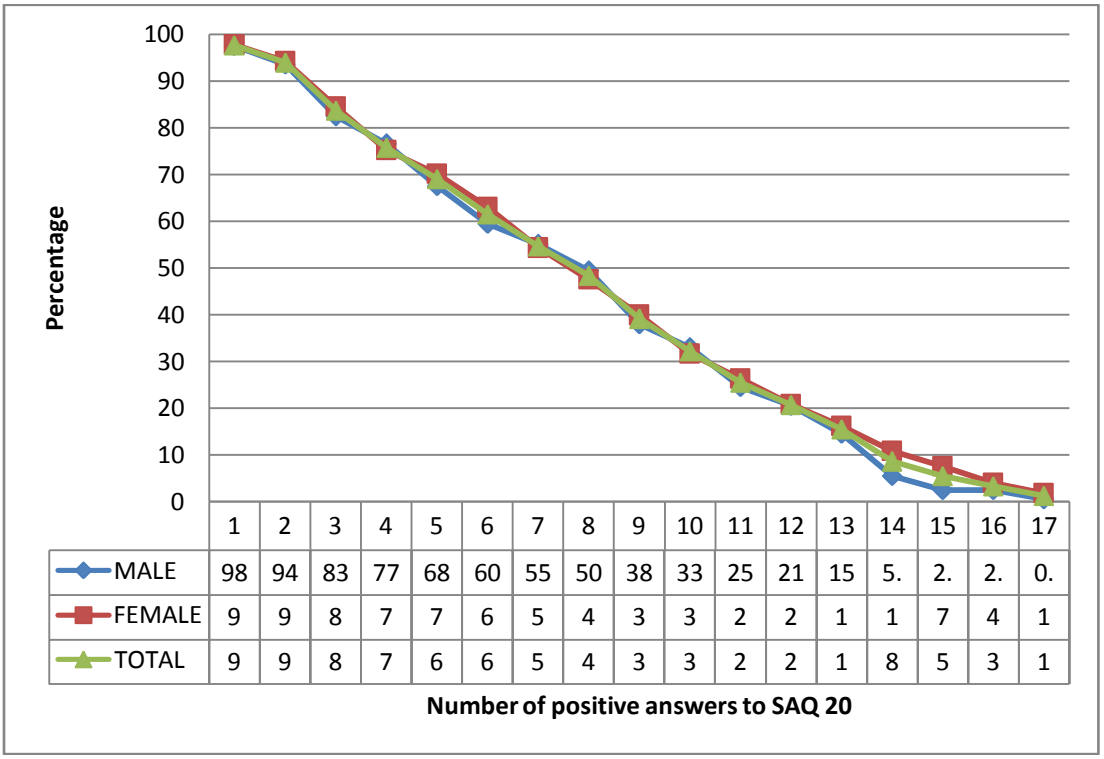


| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MALE | 98 | 94 | 83 | 77 | 68 | 60 | 55 | 50 | 38 | 33 | 25 | 21 | 15 | 5. | 2. | 2. | 0. |
| FEMALE | 9 | 9 | 8 | 7 | 7 | 6 | 5 | 4 | 3 | 3 | 2 | 2 | 1 | 1 | 7 | 4 | 1 |
| TOTAL | 9 | 9 | 8 | 7 | 6 | 6 | 5 | 4 | 3 | 3 | 2 | 2 | 1 | 8 | 5 | 3 | 1 |

**Figure 1: Distribution of male and female at different cut off scores of SAQ 20**

***Discussion***

Medical field is known to be the area of pressure and stress. Stress is a global issue that is seen all over the world in all ages. A high level of stress may have a negative effect on learning capacity of the students.

In the present study, the prevalence of mental distress was 32.2% using 10 as cut off value. The level of mental distress varied between the genders, stages of education and age. The highest level of prevalence was found in female gender (18.4%), 1st year students (14.4%) followed by 2nd year students (12.1%), 18 years of age (25.9%) followed by 19(22.2%) and 20 years(21.1). Similar findings with high level of mental distress in female gender and initial stages of education were found in studies conducted in Karnataka, Surat, Saudi Arabia (Manjunath and Kulkarni, 2013; Thangaraj and D'souza, 2014; Manjunath *et al.*, 2014; Sani *et al.*, 2012; Solanky *et al.*, 2012).

The reasons that can be attributed to stress among 1st and 2ndyear students may be language problem, vast syllabus, fear of failure, parental and peer pressure, tight schedule, away from home, tough topics, substance abuse etc (Mandal *et al.*, 2012). Students or their parents often choose medicine considering it to be the safest profession in terms of reputation and economic stability. This results in interrupted commitment towards the profession resulting in stress and depression (Jayakrishnan *et al.*, 2012). Medical students are the doctors of tomorrow and it becomes important to intervene and provide support at right time for their future career and their patients. Students hesitate to ask for support when they are suffering from mental distress and often feel it as a sign of weakness. Medical colleges should create a supportive environment to reduce the level of stress in students, train staff to early identify the reasons for the suffering and apply preventive measures to maintain good mental health and wellbeing of the students (General Medical Council, 2013).

***Conclusion and Recommendation***

The major finding in this study is the high prevalence of mental distress in medical students which calls for early detection, intervention and support. Further studies are necessary to identify the causes for the mental illness among the medical students.

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