

## Anxiety and depression in medical students and its association with coping method adopted by them

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### ABSTRACT

**Background:** Medical undergraduates are under considerable stress especially before their final exams.

**Aim:** To investigate student's anxiety, depression and perceived mental pressure levels and whether the use of wishful thinking or problem-solving coping was related to anxiety and depression levels.

**Methods:** We studied 92 final year MBBS students of a rural medical college about 2 months before final exams using a pre-tested questionnaire.

**Results:** The prevalence of depression, anxiety and perceived mental pressure was 9 %, 54% and 46% respectively. The need for counseling was felt by 54.3% of students. None of the socio-demographic factors studied showed a significant association with the prevalence of anxiety or depression or perceived mental pressure or use of particular coping mechanism. Wishful thinking was associated with increased prevalence of anxiety ( $p < 0.001$ ).

**Conclusions:** These findings justify the counseling sessions to be started for all the students rather than focusing on certain groups.

**Key words:** medical students, anxiety, coping methods, problem solving, wishful thinking

### INTRODUCTION

Mental health problems are a major public health concern due to their high prevalence rates, difficulties related with the treatment, and their tendencies to become chronic. Depression and anxiety are commonest mental illnesses especially in adolescents.<sup>1</sup> Bartlett pointed out there are immense empirical support for the belief that anxiety and depression impacts adversely on physiological and mental health.<sup>2</sup> A medical graduate (MBBS) has to read many hours a day routinely to understand vast field of health care. Family and society has very high expectations from them. So we hypothesize that there may be some degree of anxiety and depression in every MBBS student.

They are also likely to have various coping methods to deal with the perceived stress. These methods may be broadly grouped as wishful thinking and problem solving. Wishful thinking is the formation of beliefs and making decisions according to what might be pleasing to imagine instead of by appealing to evidence, rationality or reality. Problem solving is a mental process and is part of the larger problem process that includes problem finding and problem shaping. Considered the most

complex of all intellectual functions, problem solving is a higher order cognitive process that requires the modulation and control of more routine or fundamental skills.

Studies related to various aspects of stress have been reported from abroad, but such data from India is scarce.<sup>3-6</sup> Therefore, this study was undertaken to assess the level of perceived mental pressure among final year medical graduates; to assess the prevalence of anxiety and depression and affecting factors; and to assess the relationship between anxiety and depression and the coping methods used.

### MATERIALS AND METHODS

This cross sectional study was carried out among the final year medical undergraduates about a month before their final exams. All the students were invited to participate in the study. Data was collected using a self administered questionnaire, which had 3 sections consisting questions for socio-demographic information, coping up mechanisms, perceived stress and anxiety. There was also a section to for rating anxiety and depression. The coping mechanisms were assessed using 14 questions amended from the

Ways of Coping Revised Scale.<sup>7</sup> For coping mechanisms, the score for problem solving and wishful thinking was calculated by awarding 1 point to each response. Final categories were decided as 'problem solving' if total score for problem solving was more than that for wishful thinking, as 'wishful thinking' if total score for wishful thinking was more than that for problem and as 'both' if both scores were identical. Anxiety and depression were rated using 14 items self-administered rating scale-Hospital Anxiety and Depression Scale (HADS).<sup>8</sup> The questionnaire was anonymous and there was no time constraints. Data was entered in Microsoft Excel and analyzed using SPSS-14.

## RESULTS

The response rate was 94%. There were 92 participants in total, comprising of 67 boys and 25 girls. Their ages ranged from 21 to 25 years. 14(15%) students were from rural background; 29(31%) were from non-English medium schools; and 13(14%) had history of failure in previous MBBS examinations. 25(27%) students stayed outside, 65(70%) stayed in hostel and 2(2%) were day scholars. Around 42(46%) experienced various levels of exam related mental pressures. Of these 12(13.1%) attributed their mental pressures to their families. Fifty (54.3%) students had felt the need for some kind of counseling during last one year for their perceived stress, but none had sought any such help from a counselor. None of the variables studied (gender, failure status in any of MBBS classes, place of stay, type of background, medium of education till 12<sup>th</sup> grade) showed a significant association with the prevalence of anxiety or depression or perceived mental pressure.

The prevalence of depression and anxiety was 9% and 54% respectively. 59(64.13%) students were predominantly wishful thinking copers while 18(19.56%) were predominantly problem solving copers and remaining 15 (16.3%) students were adopting both the coping methods. Depression was not significantly associated with any of the coping mechanisms. Anxiety was associated with wishful thinking as shown in table 1. Students used

listening to music, sports, reading (non-academic), talking to friends as common activities to overcome perceived stress.

**Table -1.** Hospital Anxiety and Depression Scale (HADS) score for Anxiety

	No anxiety	Borderline Anxiety	Anxiety	Total
Wishful thinking	5	10	44	59
Problem solving	11	4	3	18
Both a & b	7	6	2	15
Total	23	20	49	92
Chi-square : 35.625, p: <0.001				

## DISCUSSION

The study lends weight to our belief that the medical students have considerable amount of perceived stress or mental pressure. The stress levels likely to be higher during exam periods as reported in several studies.<sup>9</sup> In our study, 42 (46%) students experienced various levels of exam related mental pressures, which is comparable to other studies reported from Indian subcontinent.<sup>4,5,6</sup> As different methodologies were used in different studies, these rates are not necessarily comparable but all point in the same direction. The prevalence of depression and anxiety based on HADS score was 9% and 54% respectively. Similar high prevalence of anxiety and depression has been reported from other Asian medical students also.<sup>10,11</sup> Even though many students felt the need for counseling sometime in last year none of them sought any professional help. Similar lack of use of mental health counseling services are also reported from developed countries.<sup>12</sup>

None of the socio-demographic factors studied showed a significant association with the prevalence of anxiety or depression or perceived mental pressure. Therefore, any strategy to deal with this issue will call for efforts focusing on the entire group. The general counseling sessions dealing with stress management will need to be designed.

## CONCLUSION

Institutes are required to proactively seek out those students who need counseling and arrange for the necessary services. Such strategies have been tried successfully abroad. Students support cells and mentorship services could be few such examples. Many students have attributed their stress to family related factors, families should be actively involved in all such activities.

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