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Research Article

**CORRELATES OF COPING STYLES AND PSYCHIATRIC  
MORBIDITY IN STUDENTS OF GUJRANWALA MEDICAL  
COLLEGE, GUJRANWALA**<sup>1</sup>Dr. Sidra Habib, <sup>2</sup>Dr. Aqsa Maqsood, <sup>2</sup>Dr. Rafia Zubair<sup>1</sup>Rawalpindi Medical College<sup>2</sup>Gujranwala Medical College**Abstract:**

**Objectives:** This study was carried out with the following objectives: 1. To find out the level of distress and prevalence of psychological morbidity. 2. To observe an association between the GHQ-12 and study variables: (i) gender (ii) class (iii) living status of students (iv) current status of parents. 3. To observe an association between the GHQ-12 and coping.

**Method:** This cross-sectional study consisted of 86 medical students from all the five classes of Gujranwala Medical College, Gujranwala between June and July, 2015. General health questionnaire-12 to measure psychological morbidity and cope questionnaire (brief COPE) to measure coping were administered. Data were analyzed using SPSS version 21 at 5% significance level. Chi-square, frequency distributions, Pearson's correlation, Odd ratios, and Confidence Intervals were calculated to determine the levels of risk.

**Results:** 86 students returned completed questionnaire. 23 (26.7%) were GHQ-12 cases (i.e., scored  $\geq 21$ ). Among the students who had psychological morbidity, majority were females (73.91%), most were in their clinical years (73.91%) and were living in hostel (56.52%). The coping strategies commonly utilized by those who had morbidity included among others 'religion', 'acceptance', 'self-blame', 'planning' and 'positive reframing'. They, however, utilize less of 'instrumental support' as a coping strategy.

**Conclusion:** When it comes to facing stress, medical students use 'religion' and 'active coping' more often. Arrangement of recreational activities in college can help to improve mental health which can aid in active coping. With the help of promotion of principles of mental health education, we can spread awareness and psychological problems arising in the future can be avoided.

**Keywords:** Coping styles, psychiatric morbidity, cross-sectional study, medical students, gender, living status.

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**INTRODUCTION:**

There is a huge transition in the life of an individual by the time he/she enters a medical school. As the time passes by, and as they progress towards clinical years, their mental health regresses and they can experience a variety of psychological problems [12,13,14,15]. Personal health habits and behavior can be a major cause of poor health if the stressor is not perceived and handled properly. [14,16]. Several factors (e.g., poor employment prospects, financial problems, workload, and examinations) could exacerbate psychological morbidity [5]. Psychiatric morbidity generally refers to the incidence of both physical and psychological deterioration as a result of a mental or psychological condition [6].

Coping is the process with the help of which various difficulties and problems in life are handled in order to work through them and to overcome them [19]. Coping styles adapted have a great influence on the way a stressor is managed [17]. It protects one against stress. Problem based coping is focused at solving the problem and is the most adaptive technique [18]. Emotions based coping is targeted to minimize or manage feelings of distress associated with the cause of stress. Medical students are highly stressed out because of endless responsibilities, but with the passage of time they learn to handle the situations with the help of different coping styles.

In an article by Chandrashekhar T Sreeramareddy, Pathiyil R Shankar, VS Binu, Chiranjoy Mukhopadhyay, Biswabina Ray and Ritesh G Menezes, it was reported in their cross sectional study that students generally used active coping strategies and alcohol/drugs was the least used strategy. There was variation in coping styles in GHQ cases. (published on: 2<sup>nd</sup> August, 2007). In another cross sectional study, Yussuf AD, Issa BA, Ajiboye PO, Buhari OI [4] reported that the coping strategies commonly utilized by those who had morbidity included among others use of religion, planning, acceptance, and positive reframing. 'Substance use' was less utilized. Those with Psychiatric morbidity were significantly more likely to engender the use of 'religion' and about 4 times less likely to engender the use of 'positive reframing'. (published on: May 2013). Sandhya Cherkil, Seby J. Gardens and Deepak Kuttikatt Soman reported in their cross sectional study that there is a significant positive association between overall stress score and coping styles of 'self-blame' and 'humor'. 'active coping' and 'religion' have significant positive association with academics and self-expectations. (published on: Oct-Dec 2013).

There is a great distress experienced during undergraduate medical years that can not only cause instantaneous psychological morbidity but can also predict later problems in the life of a doctor resulting in insufficient and unsatisfactory patient care [4,11]. Everyone tries to cope with the stressors and the distress caused by them with the help of a coping strategy. The responses to various stressors and coping strategies have not previously been studied in this institution. Hence the present study was conducted to know about various coping strategies among the undergraduate medical students during both the foundation years and clinical years of the course and note differences in the coping skills adopted according to demographic characteristics of respondents, if any. The current paper reports on the cross-sectional component of medical students.

**MATERIALS AND METHODS:****Study setting and participants:**

The data presented forms part of the cross-sectional survey which was carried out among the undergraduate medical students of Gujranwala Medical College, Gujranwala. The college runs an annual system. The college is structured into 5 years. First two years are offered basic medical sciences (e.g. anatomy, physiology, biochemistry) and clinical students (last three years) are offered clinical courses (e.g. internal medicine, obstetrics and gynaecology, surgery etc.). The study involves the medical students belonging to any of the 5 classes.

**Study design:**

The study was a cross sectional analytical survey using structured, self administered questionnaires and conducted over 8 weeks period i.e. June-July, 2015 (for the distribution and retrieval of the questionnaires). The questionnaire was made with the help of google drive and uploaded on different groups of Gujranwala Medical College on social media and students were requested to fill those questionnaires. The procedure was explained to the students and they were given reassurance of confidentiality of the study. A total of 100 students were approached randomly from all the five classes including first two years (foundation years) and last three years (clinical years). Most of the students filled the forms and nearly 80% responses were obtained. Some students were not available on social media so they had to be approached personally. So for the rest of the responses, they were approached randomly during their lecture hours and with their consent, their responses were recorded. 86 complete responses were included as the study sample. Students who scored ? on General Health Questionnaire-12 (GHQ-12) were regarded as having psychiatric morbidity (i.e. GHQ

cases) and those who scored ? were regarded as having no morbidity (i.e. GHQ non-cases).

#### Ethics:

All the students in the college were invited to participate, with such participation being voluntary. They were assured of the confidentiality of the study and their responses were recorded after their verbal consent.

#### Instruments and parameters:

##### *General Health Questionnaire-12:*

The GHQ-12[9,21] is a screening instrument to detect current, diagnosable psychiatric disorders and is intended for use in general practice and community settings. The GHQ scoring method (0-1-2-3-4) was adopted, and a cut-off point of 21 was used in accordance with previous studies (and is noted as “psychiatric morbidity” in the result section).

##### *COPE questionnaire (Brief COPE):*

The Brief COPE, an abridged version of the COPE inventory[1] was used. It presents fourteen scales all assessing different coping dimensions (e.g., ‘venting’, ‘positive reframing’, ‘humor’, ‘denial’, ‘acceptance’, ‘religion’, and ‘substance use’). [1] The students were asked to indicate how they respond to stressors. The response choices range

from (1) ‘never’ to (4) ‘always’. It can be used to assess state coping (the particular way people cope with a specific stressful situation) and trait coping (the usual way people cope with stress in everyday life). The 4-way Likert responses were reduced to binomial responses of ‘No’ (i.e., ‘never’/‘rarely’) and ‘Yes’ (i.e., ‘sometimes’/‘always’).

#### Data analysis:

Data were analysed using SPSS version 15, with level of significance set at 5%. Chi-square, Pearson’s correlation, Odd ratio, and Confidence Intervals were calculated to determine the levels of risk.

#### RESULTS:

Of the 100 students in all the five years to whom questionnaires were given, 86 returned completed questionnaires (i.e. a response rate of 86%). There were 75.6% females and 24.4% males, 26.7% were in their foundation years and 73.3% were in their clinical years, 34.9% were day scholars and 65.1% were living in hostels, 5.8% of them were living with single parent and 94.2% were having both of their parents alive and living together. All of them were Muslims. (Table 1).

Variables	N(%)
Gender:	
Male	21(24.4%)
Female	65(75.6%)
Class:	
Foundation years	23(26.7%)
Clinical years	63(73.3%)
Living status:	
Day scholar	30(34.9%)
Hostelite	56(65.1%)
Current status of parents:	
Both alive and living together	81(94.2%)
Single parent	5(5.8%)

According to GHQ-12 categorization, 17.4% of the students fall in the category of low distress, 55.8% in typical distress, 20.9% in psychosocial distress and 5.8%, in severe distress. GHQ cases came out to be 26.6% and so the rest of them i.e. 73.3% were GHQ non-cases (Table 2).

The mean score on GHQ-12 was 17.56±5.112. 23 students scored  $\geq 21$  on the GHQ-12 and were considered as having psychological morbidity (Table 3).

Categories	n(%)
Low distress	15(17.4%)
Typical distress	48(55.8%)
Evidence of psychosocial distress	18(20.9%)
Severe distress	5(5.8%)
total	86(100%)

		N(%)
distress	GHQ non-cases (no intervention needed)	63(73.3%)
	GHQ cases (intervention needed)	23(26.7%)

Among the students who had psychological morbidity, 73.91% were females and 26.08% males ( $p=0.828$ ). 73.91% were in their clinical years and 26.08% were in their foundation years ( $p=0.934$ ), 56.52% were living in hostel and 43.47% were day scholars ( $p=0.312$ ), and 86.95% had both their parents alive and living together and 13.04% had single parents ( $p=0.116$ ). All of the results were non-significant (Table 4).

Variables	Categories	GHQ -ve N(%)	GHQ +ve N(%)	Sig. (2-tailed)
Gender	Male	15(23.8%)	6(26.08%)	0.828
	Female	48(76.19%)	17(73.91%)	
Class	Foundation years	17(27%)	6(26.08%)	0.934
	Clinical years	46(73%)	17(73.91%)	
Living status	Day scholar	20(31.74%)	10(43.47%)	0.312
	Living in hostel	43(68.25%)	13(56.52%)	
Current status of parents	Both alive and living together	61(96.82%)	20(86.95%)	0.116
	Single parent	2(3.17%)	3(13.04%)	

The coping strategies commonly utilized by those who had morbidity included among others 'religion' (mean= 3.39 , SD=0.722 ), 'acceptance' (mean= 3.17, SD=0.650), 'self blame' (mean=3.13, SD=0.920), 'planning' (mean= 3.09 , SD=0.668) and 'positive reframing' (mean=2.96, SD=0.767). They, however, utilize less of 'instrumental support' (mean=2.30, SD=0.822) as a coping strategy (Table 5).

Coping styles	GHQ -ve		GHQ+ve		ANOVA
	mean	SD	mean	SD	
Use of religion	3.62	0.633	3.39	0.722	$p=0.159$
Use of planning	3.17	0.610	3.09	0.668	$p=0.567$
acceptance	3.13	0.707	3.17	0.650	$p=0.782$
Self blame	2.51	0.738	3.13	0.920	$p=0.002$
Positive reframing	3.29	0.580	2.96	0.767	$p=0.360$
Active coping	3.11	0.680	2.52	0.730	$p=0.001$
Instrumental support	2.73	0.768	2.30	0.822	$p=0.751$
Denial	2.20	0.749	2.43	0.945	$p=0.231$
Humor	2.90	0.817	2.78	0.850	$p=0.546$
Self distraction	2.77	0.857	2.86	0.834	$p=0.673$
Emotional support	2.95	0.756	2.78	0.850	$p=0.379$
Venting	2.31	0.743	2.52	0.790	$p=0.259$
Behavioral disengagement	2.25	0.782	2.65	0.832	$p=0.430$
Use of substances	2.08	0.938	2.43	1.273	$p=0.230$

The utilization of 'active coping' ( $p=0.001$ ) and 'self-blame' ( $p=0.041$ ) came out to be significant in our cohort whereas the rest of the coping strategies were non-significant (Table 6).

Coping styles	responses	GHQ-ve (n=63)	GHQ+ve (n=23)	Sig. (2-tailed)
Religion	Never, rarely Sometimes, always	3(50%) 60(75%)	3(50%) 20(25%)	0.336
Planning	Never, rarely Sometimes, always	7(63.6%) 56(74.7%)	4(36.4%) 19(25.3%)	0.475
Acceptance	Never, rarely Sometimes, always	12(80%) 51(71.8%)	3(20%) 20(28.2%)	0.750
Self-blame	Never, rarely Sometimes, always	32(82.4%) 31(64.6%)	6(15.8%) 17(35.4%)	0.041
Positive reframing	Never, rarely Sometimes, always	4(44.4%) 59(76.6%)	5(55.6%) 18(23.4%)	0.053
Active coping	Never, rarely Sometimes, always	10(45.5%) 53(82.8%)	12(54.5%) 11(17.2%)	0.001
Instrumental support	Never, rarely Sometimes, always	33(71.7%) 30(75%)	13(28.3%) 10(25%)	0.733
Denial	Never, rarely Sometimes, always	41(77.4%) 22(66.7%)	12(22.6%) 11(33.3%)	0.276
Humor	Never, rarely Sometimes, always	14(66.7%) 49(75.4%)	7(33.3%) 16(24.6%)	0.433
Self-distraction	Never, rarely Sometimes, always	22(73.3%) 41(73.2%)	8(26.7%) 15(26.8%)	0.991
Emotional support	Never, rarely Sometimes, always	16(64%) 47(77%)	9(36%) 14(23%)	0.214
Venting	Never, rarely Sometimes, always	38(77.6%) 25(67.6%)	11(22.4%) 12(32.4%)	0.300
Behavioral disengagement	Never, rarely Sometimes, always	38(77.6%) 25(67.6%)	11(22.4%) 12(32.4%)	0.300
Use of substances	Never, rarely Sometimes, always	41(77.4%) 22(66.7%)	12(22.6%) 11(33.3%)	0.276

### DISCUSSION:

Based on the results analysis, it was possible to study the psychological behavior of various students of a medical college. There were less GHQ cases reported in previous studies as compared to our studies. This low morbidity could be because of large sample size [25], or because the sample which was considered consisted of medical students from foundation years only[9]. Therefore, an increase in the number of cases in our study might be because of relatively small sample size or it could be due to the fact that we are considering both the foundation years and the clinical years.

Miller & Surtees [30] used the GHQ-30, Dahlin et al [8] used a Higher Education Stress Inventory (HESI). In addition, Sreeramareddy et al [22] and Ko et al [12] used a cut off 4/5 for GHQ-12 and AD Yousaf, BA Issa used a cut off value of 3 for GHQ-12. While present study used a cut off value of 21 for GHQ-12.

The observed higher morbid levels in female medical students as compared to male students in our study was consistent with previous findings which also reported higher stress in female medical students [15,26,27]. In another study, by Shaikh et

al[28] stress level in male students came out to be higher as compared to female students, and another study reported equal levels of stress in both the sexes.[9] The reason behind this could possibly be due to the fact that in our study a random sample was obtained which had unequal distribution of males and females hence the sample was not representative or there could be another reason that women take more stress as compared to men.

The high morbidity level among the students living in hostels as compared to the day scholars is consistent with the findings of previous studies which have also reported the same[9,29]. It could possibly be due to the fact that that we took a random sample which had unequal distribution of day scholars and students living in hostel hence the sample was not representative. It is also a possibility that students feel more stressed because they face homesickness as they are away from their localities.

Another variable which we took into account was the current status of parents of these children. We wanted to find out whether the students living with single parent feel more under stressed as compared to those living with both of their parents. However

we observed that the students living with both of their parents were more stressed as compared to those having single parent. The reason behind this could be the fact that we took a random sample which had unequal distribution of day scholars and students living in hostel hence the sample was not representative.

Coping strategies include methods which help to accept and react according to the stressor. The efforts which are carried out to deal with stressors can be behavioral or intellectual. This helps in reducing or minimizing the stressful event to a tolerable level [1,2,3]. Among various coping strategies, those which were highly deployed by the students were 'use of religion' and 'acceptance' which is partially in accordance and partially in contrast to previous studies. AD Yussuf[4] has mentioned in his research that 'religion' and 'positive reframing' are highly adapted methods. The partial similarity in results (i.e. use of religion) is obtained because both are predominantly Islamic states. This might also explain why the least utilized coping was 'use of substances', which is similar to the finding of Sreeramareddy *et al*[7] but contrary to that of Liselotte *et al* [8] who reported increased use of substances by medical students.

Moreover, avoidant strategy was also among the least utilized coping methods in accordance with previous studies like that of Sreeramareddy [7].

The students in previous research as well as in our cohort adopted active coping strategies. However, the difference lies in the manner of active coping i.e. in previous study[4], the way of coping which was highly utilized was 'positive reframing' and in our cohort, majority of the students utilized the technique of 'acceptance'. 'self blame' also carried out a significant value in our study.

Studies have shown that when faced with problems, many students would turn to friends and classmates for support while others would turn to family, and religion, while others would keep the problems to themselves, or engage in sports, music, sleeping or going into isolation [9,10].

### CONCLUSION:

Several findings emerge from this study and it is citable that in order to cope with stress, medical students used 'religion' and 'active coping' more often. This was indicative of the effectiveness of religion in the study location. The students with morbidity more often utilized 'religion', and less often 'acceptance' as coping styles.

Arrangement of recreational activities in college can help to improve mental health which can aid in active coping. Regular counseling sessions can play

a major role in active coping process. With the help of promotion of principles of mental health education, we can spread awareness and psychological problems arising in the future can be avoided. And then these students would be able to offer their services more efficiently and effectively in their practical lives.

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