ASSESSING STRESS COPING METHODS AMONG MEDICAL STUDENTS IN DISTRICT PESHAWAR PAKISTAN

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Abstract

Background: Stress coping methods are used by the individuals to overcome daily stresses. It is important to maintain stress within limits for normal functioning and productivity of a human being. Medical students come across many stress factors during their medical training. Stress coping is divided into Adaptive and Non-adaptive coping. Students using adaptive coping strategies (ACS) are considered to have positive coping methods and results in long term constructive outcomes i.e. improved self-esteem, stronger social bonds and wisdom, while students using non-adaptive coping strategies are at risk of mental health issues. Our objective was to evaluate stress coping methods among medical students of public and private medical colleges of district Peshawar.

Methods: This study was a descriptive cross-sectional study. Data was collected using convenient sampling technique from 200 medical students of both Public and private sector of district Peshawar. Equal numbers of boys and girls were selected from age groups of 18-25 years. Demographic variable along with methods to cope stress were collected using validated pre-tested questionnaire called "Brief cope scale (BCS) of Urdu version by Akhtar (2005)". Standard cut off value of 56 was used to differentiate between students having adaptive or mal-adaptive coping styles. Data collected was analyzed using SPSS.

Results: Students of public medical college scored M=71.78 with SD=8.955 while students of private medical colleges scored M=69.20 with SD 10.07.

Conclusion: The findings of the study suggest that undergraduate students in medical colleges have non-adaptive coping methods rather than adaptive ones. Female students used more adaptive coping skills than male students. Students in public sector had better coping skills than students of private medical colleges.

Keywords: Public, private, cross sectional study, coping, medical students
Introduction
Stress occurs when an individual is confronted with a situation that is perceived as overwhelming and with which they cannot cope (1). Stress coping methods are the mental and behavioral components which are utilized by the individual to overcome daily strains and difficulties. Coping is divided into Adaptive and Non-adaptive stress management strategies (2). Stress if controlled by Adaptive coping methods results in long term high-quality outcomes like that of improved self-awareness, self-esteem, more potent social bonds and development of the Wisdom. Medical students suffer from various levels of pressures (excessive homework, unclear assignments) (3) (4), time management, uncomfortable classrooms, weekly tests and assignments, pressure to get good scores (4) social and financial issues) (3). In Pakistan, high parental expectations, sleep problems and future uncertainties (5) (6); (7) (8) were additional factors which could affect their health and academic performance (9). Ethnicity, culture and socio-economic values affect the coping methods. Students who use Adaptive coping methods have better coping skills, while those who use Non-adaptive coping methods, are at risk of mental health problems (10). Adaptive coping are reactions which targets the stress factor itself, while Non-adaptive coping strategies includes activities or mental states that keep one away from solving stressful problem (2) adaptive coping includes (11) taking "action" to manage the stress: "planning", to confront the stress; "acceptance", and "positive reframing", by growing from it or seeing it in a more positive light. non-adaptive or Avoidant strategies include "denial"; "disengagement" or giving up the attempt to attain the goals; "venting", an enhanced consciousness of one's stressful condition and tendency to express those feelings; and "humor", making jokes about the stress factor (11). Based on the analysis of the coping methods used by the students prediction can be made about future success. Students who take action and deal directly with a problem would most probably resist future burnout (12).

Studies about coping among medical students were not found in the literature except few in the recent past (13) (14). Purpose of the study was to find out the various coping methods and their association with demographic factors i.e. age, gender, and socio-economic status, among medical students of Peshawar. Local evidence generated can be used to identify and target non-adaptive methods.

Methodology
This cross-sectional study was conducted from June to September 2017. Sample was taken from four (two public sector and two private) medical colleges from district Peshawar after approval from the ethical committee. 200 medical students (100 male and 100 female) were selected from medical colleges through purposive convenient sampling technique. From each college 50 respondents with age range between 18-25 year were selected. The Carver brief cope scale modified by Akhtar (2005) was used for data collection. The scale comprised of 28 items with four point Likert scale (1= I have not been doing this at all, 2= I have been doing this a little bit, 3= I have been doing this most often and, 4= I have been doing this all the time). The cut off value for the coping scale was 56. Score greater than 56 were taken as adaptive coping while below 56 as non -adaptive. These 28 items encompasses 14 subscales (active coping, planning, acceptance, denial, self-distraction, use of substance, use of emotional support, use of instrumental support, behavioral disengagement, venting, positive reframing, humor, religion, and self-blame). These subscales were further summed up into two broader categories i.e. Adaptive and non-adaptive. Demographic information including age, gender, father's income and colleges was also collected. Data collected was analyzed by (SPSS.V.22). Written informed consent was obtained from the participants. Students having exams or absent were excluded from the study.

Results
A total 200 students participated in the study, demographic features are discussed above in (Table 1). 57.4% Male and 42.6% female were included in the survey. 14.2% students were in age range of 16-20 years, 83.3% were in age group of 21-25 while 0.5% students were in age range of 26-30. 51% students from Public medical colleges while 49% students from Private medical colleges participated in the study. Out of the total, 27.5% belong to socio-economic status <50000, 27.5% belong to the income group between 50000-75000 while 45% belong to income group >75000

Table 1: Demographic profile (N=200)

| Demographic Variables | Categories | N  | %    |
|-----------------------|------------|----|------|
| Gender                | Male       | 117| 58.5%|
|                       | Female     | 83 | 41.5%|
| Age                   | 16-20      | 29 | 14.5%|
|                       | 21-25      | 72 | 36.0%|
|                       | >25        | 17 | 8.5% |
| College               | Total Students from Public medical colleges | 104 | 52.0% |
|                       | Total Students from Private medical colleges | 96 | 48.0% |
| Father's income       | 1= <50000  | 55 | 27.5%|
|                       | 2= 50000-75000 | 58 | 29.0%|
|                       | >75000     | 87 | 43.5%|

Gender-wise scores of Brief Cope Scale is given in table 2. Mean score of male was 70.06±11.0 while mean score of female was 71.22 ± 6.9.

Table 2: Gender-wise scores of BCS (N=200)

| Gender | N  | Mean ± SD |
|--------|----|-----------|
| Male   | 117| 70.06 ± 11.0 |
| Female | 83 | 71.22 ± 6.9 |

On the basis of medical colleges scores of Brief Cope scale is given in fig 1. 71.78% was scored by Public Medical College while 69.2% was scored by the Private Medical College.

Figure 1: Scores of BCS on the basis of type of medical colleges (N=200)

Mean scores of the main categories of Cope are given in tab 3. Adaptive coping was seen in 3.8% of the students while 4.1% Non-adaptive coping was observed among the students.

Table 3: Mean (Percentage) Scores Of The Main Categories Of Cope

| No | Category | Type of Coping methods | Mean (%) |
|----|----------|------------------------|----------|
| 1  | Adaptive coping | Problem-focused coping (Active coping, Emotional support, Instrumental support, Planning) | 16.3 (4.5%) |
|    |          | Positive coping (Emotional support, Positive reframing, Humor, Acceptance) | 13.2 (3.2%) |
| 2  | Non-Adaptive coping | Active avoidance coping (Self-distraction, Substance use, Behavioral disengagement, Venting, Self-blame) | 27.7 (4.1%) |
|    |          | Religious/Denial coping (Denial, Religion) | 9.12 (2.2%) |

Self-Distraction: Out of the total 90(45.0%) students used a little bit, 38 (19.0%) used moderate and 21 (10.5%) used a lot, a cumulative of 149 (74.5%) used to turn to work or other activities to take their mind off the stress factor. 79(39.5%) utilized a little bit, 57 (28.5%) utilized something such as going to the movies, watching TV, reading, daydreaming, sleeping, shopping etc. to cope with their stress.

Active Coping: 63(31.5%) used a little bit, 20 (10.0%) used moderate while 45 (22.5%) used a lot to concentrate their efforts on doing something about the situation they are in. 61(30.5%) tried a little bit, 63 (31.5%) tried moderately, while 24(12.0%) tried a lot to take action to make the situation better.

Denial: Out of the total, 76(38.0%) used denial a little bit, 56 (28.0%)
used it moderately while 35(17.5%) used it a lot, that they have been saying to themselves "this isn't real".
75(37.5%) used this technique a little bit, 52(26%) moderately while 47(23.5%) a lot that they have been refusing to believe that it had happened.
Substance Use 16(8.0%) utilized Substance Use i.e. Alcohol or other drugs to make themselves feel better a little bit, 13(6.5%) moderately, while 150(75.0%) utilized this a lot. 198(97.5%) used this technique a little bit 241(12.0%) used it moderately, while 241(12.0%) used a lot that they used Alcohol or other drugs to help get through it.
Behavioral disengagement 38(19.0%) used Behavioral disengagement a little bit 72(36.0%) moderately while 66(33.0%) used it a lot that they gave up trying to deal with it.
33(16.5%) used this technique a little bit, 81(40.5%) used it moderately, while 63(31.5%) used it a lot that they had given up the attempt to cope.
Emotional support: 51(25.5%) students sometimes, 80(40.0%) making fun of the situation. 70(35.0%) a little bit, 88(44.0%) moderately while 218(112.0%) a lot that had been saying things to let their us feelings come up. 96(48.0%) a little bit 40(20.0%) moderately, 35(17.5) a lot that had been expressing their negative feelings.
Positive reframing: 51(25.5) a little bit, 77(38.5) moderately, 30(15.0) a lot that had been trying to see it in a different light to make it seem more positive. 95(47.5%) a little bit 37(18.5%) moderately while 33(16.5%) a lot that had been looking for something good in what is happening.
Self-blame: 41(20.5) a little bit, 90(45.0) moderately while 32(16.0) a lot that by criticizing themselves. (16.5%) a little bit, 61(31.0) moderately while 74(37.0) a lot a cop by blaming themselves for things that happened.
Planning: 97(48.5%) a little bit, 37(18.5%) moderately while 19(9.5) a lot by trying to cope by trying to come up with the strategy about what to do. 96(48.5) students a little bit 46(23.0) moderately while 16(8.0) a lot of them had been thinking hard about what steps to take.
Acceptance: 57(28.5) a little bit, 33(16.5) moderately while 17(8.5) a lot that said that they had been learning to live with it. 54(27.0) a little bit, 88(44.0) moderately while 25(12.5) a lot of them had been accepting the reality of the fact that it had happened.
Instrumental support: 52(26.0) a little bit, 82(41.0) moderately while 32(16.0) a lot that had been getting help and advice from other people. 95(47.5%) a little bit, 38(19.0) moderately while 27(13.5%) a lot that had been trying to get advice or help from other people about what to do.
Humor: A few , 29(14.5) a little bit, 69(34.5) moderately while 80(40.0) a lot made fun of the situation. 70(35.0) a little bit 50(25.0) medium 56(28.0) a lot had been making jokes about it.
Religion: It was 86(43.0%) a little bit, 28(14.0) moderately, while 21(10.5%) a lot had been praying and meditating. 90(45.0%) a little bit, 36(18.0) moderately while 21(10.5%) a lot had tried to find relief in religion or spiritual beliefs.
Discussion
The current research was aimed to evaluate stress coping methods among medical students of district Peshawar in public and private medical colleges. The current study showed coping methods among medical students with the mean scores of Public medical college M 71.78 (8.95) and Private medical colleges M=69.20 (SD=8.95). Comparison of the coping methods among medical students of district Peshawar in public and private medical colleges. The current study showed coping methods among medical students of district Peshawar in public and private medical colleges. The current study showed coping methods among medical students of district Peshawar in public and private medical colleges. The current study showed coping methods among medical students of district Peshawar in public and private medical colleges. The current study showed coping methods among medical students of district Peshawar in public and private medical colleges.
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