

# Spiritual Health and Coping Strategies Among Medical Students in Crisis Situation: A Cross-Sectional Survey

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## Abstract

**Objective:** To assess the spiritual health of medical students and to identify the coping strategies used in crisis situation.

**Methods:** A cross sectional study was done during 2017 at Hamdard College of Medicine & Dentistry, Karachi. Simple random sampling technique was used for data collection. Spiritual Health Assessment Scale was used to measure the level of spiritual health and Brief COPE scale was used to assess the varying coping strategies practiced in response to stress. Descriptive analysis was done, overall spiritual health score was obtained, while frequencies of various coping attributes were determined by using SPSS version 22. Independent t-test was used for association of different domains of spiritual health between male and female students. P-value <0.05 was considered as statistically significant.

**Results:** Out of total 511 students, 298 (58.3%) were male and 213 (41.7%) female. Mean age was  $21 \pm 1.8$  years. Students 261 (51.1%) were found to have good spiritual health. Statistically significant ( $P < 0.05$ ) differences was observed between male and female students doing gratitude, act according to moral values, introspection, knowing purpose of own life, own strengths, solutions to deal with weaknesses, performing yoga to achieve and maintenance of spirituality. Students using active coping were 146 (28.6%), substance use 289 (56.6%), turning to religion 188 (36.8%) and humour 178 (34.4%).

**Conclusion:** The study reveals that most of the medical students have good spiritual health. Coping strategies used by medical students during their academics are mainly substance use, active coping and turning to religion for management of stress.

**Keywords:** Brief COPE, spiritual health, medical students.

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## Introduction

Spiritual health is the youngest element of health as approved by the WHO in 1998. The special group of the WHO executive board, 1998 pro-

posed that the preamble of the constitution should

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be amended as follows "Health is a dynamic state of physical, mental, spiritual, and social well-being and not merely the absence of disease or infirmity"<sup>1</sup>.

Spiritual health is an important factor in the well-being of a person. It is either seeking the help of The Almighty (Allah) or it is the will power which helps human beings to cope up with crisis situations. Spiritual health has been defined as "the estate of being where an individual is able to deal with day to day life in a manner which leads to realization of one's full potential, meaning and purpose of life; and happiness within"<sup>2</sup>.

Medical students face different kind of stressors during their studies and in life<sup>3</sup>. The level of stress among medical students depends on the setting of the medical school, the curriculum and the examination system<sup>4</sup>. Stress among medical students can affect their academic performance by decreasing their attention span and affecting their decision making skills<sup>5</sup>. Also stress in medical students is receiving attention because it has been recognized that tired, tense doctors may not provide high quality care<sup>6</sup>.

Previous studies found high level of stress among the medical students<sup>7,8</sup>. To cope up with the stress or crisis situation, medical students usually try either of the two coping strategies; active coping strategies and avoidant coping strategies. Active coping strategies are either behavioural or psychological response designed to change the nature of the stressor itself or how one thinks about it. Avoidant coping strategies leads people into activities such as smoking or mental states that keep them from directly addressing stressful event<sup>9</sup>.

Recently a study was conducted among physicians in Brazil, India and Indonesia on spirituality and health. It was found that most of them believed in the curative role of spirituality<sup>10</sup>.

There have been very few studies done so far to assess the perceptions of stress among students, and still fewer are those done on medical student population. In Pakistan, a Muslim country, status of spiritual health of undergraduate medical students and their coping skills in crisis situation is yet to be explored. The objective of this study is to assess the spiritual health of medical students and to identify the coping strategies used by medical students in crisis situations.

## Subjects and Methods

A cross sectional study was conducted from March till June 2017 among medical students at Hamdard College of Medicine and Dentistry, Hamdard University, Karachi. Simple random sampling technique was used to collect the data from students (1<sup>st</sup> to 5<sup>th</sup> year) who agreed and gave consent to participate. Using the formula for estimating

population proportion with an anticipated prevalence of 50% and 99% confidence interval, the sample size was found to be 453<sup>11</sup>. Ten percent students were increased due to dropouts, hence a total of 511 students were included. Students who were not physically or mentally fit on the day of data collection were excluded. The approval was taken from the research committee of Hamdard University, Karachi.

The tool which was used in the study is the Spiritual Health Assessment Scale (SHAS) and Brief COPE Scale. The Spiritual Health Assessment Scale contains three domains of spiritual health; Self-Development, Self-Actualization and Self-Realization. Each of the domains has seven items in itself related to domain. Each of the items is given scoring on 5-point Likert scale i.e. score '1' for 'Never', '2' for 'Rarely', '3' for 'Seldom', '4' for 'Often' and score '5' for 'Always'. Likewise, each domain score ranges from '7' to '35' and total spiritual health score ranges from '21' to '105'. Poor spiritual health was considered when spiritual health score was between '21' to '49', Fair spiritual health score between '49' to '77' and Good spiritual health score between '77' to '105'.

The Brief COPE is designed to assess the varying coping strategies used by individuals in response to stress. The Brief COPE is comprised of 14 scales, each of which assess the degree to which a respondent utilizes a specific coping strategy. These scales include: Active Coping, Planning, Positive Reframing, Acceptance, Humour, Religion, Using Emotional Support, Using Instrumental Support, Self-Distraction, Denial, Venting, Substance Use, Behavioural Disengagement, and Self-Blame.

Respondents rate items on a 4-point Likert scale, ranging from 1 "I haven't been doing this at all" to 4 "I've been doing this a lot". Each of the 14 scales comprised of 2 items and total scores on each scale range from 2 (minimum) to 8 (maximum). Higher scores indicate increased utilization of that specific coping strategy. None of the items are reverse scored and there is no overall total score; only total scores for each of the scales.

The questionnaire was administered separately in each class during their academic session. Before administration, a 10-minute briefing was given regarding the purpose and different aspects of the study. More after description of the questionnaire 1 & 2, students were asked to give their own views and perception in unbiased manner. It was emphasized that the identity of the participants will remain unidentified and the data will not be able to tracked back to the students. Students were given 40 minutes free time to respond to the provided questionnaire.

Data was analysed by using SPSS version 22. Descriptive analysis was done for all independent variables. Spiritual health score was measured according to the level, whereas frequency of various coping attributes was determined. Independent t-test was used to observe the association of different domains of spiritual health and sex. P-value <0.05 was considered as statistically significant.

**Results**

A total of 511 undergraduate medical students, 298 (58.3%) males and 213 (41.7%) females participated and filled the Brief COPE Scale and Spiritual Health Scale. The mean age of students was 21.2 ± 1.8 years. The break-up of students was, 1<sup>st</sup> year 92 (18%), 2<sup>nd</sup> year 90 (17.6%), 3<sup>rd</sup> year 85 (16.6%), 4<sup>th</sup> year 88 (17.2%) and 5<sup>th</sup> year 156 (30.5%).

Association of mean scores of all three domains of spiritual health scale i.e. self-development, self-actualization and self-realization and sex was obtained. Statistically significant (p<0.05) difference was observed between male and female students doing gratitude, act according to moral values, introspection, knowing purpose of own life, own strengths, solutions to deal with weaknesses, and performing yoga for achievement and maintenance of spirituality (Table 1).

According to level of spiritual health, the overall score of spiritual health was graded. Students having poor spiritual health were 18 (3.5%), fair spiritual health 233 (45.4%) and 261 (51.1%) reported good spiritual health ( Fig 1.).

Coping strategies used by medical students during crisis situation are adaptive coping, maladaptive coping and other common coping strategies. Among attributes of adaptive coping, student using active coping were 146 (28.6), seeking emotional support 113 (22.1%), seeking instrumental support 144 (28.5%), planning 142 (27.8%) and positive reframing 124 (24.3%). The attributes of maladaptive coping used by students are denial 138 (27.0%), behaviour disengagement 112 (21.9%), substance use 289 (56.6%), self-distraction 104 (20.4%) and self-blame 114 (22.3%). Other common coping strategies used by students are, acceptance 115 (22.5%), turning to religion 188 (36.8%), humour 178 (34.4%) and venting 116 (22.7%) (Table 2).

Table 1. Spiritual health status of medical students and mean score of each domain with gender

Spiritual Health Scale Domains	Male n = 298 Mean ± SD	Female n = 213 Mean ± SD	p-value*
<b>Self-Development</b>			
Prudence	3.35 ± 1.3	3.5 ± 1.4	NS
Gratitude	4.11 ± 1	4.33 ± 1	0.022
Generosity	4.05 ± 1	4.15 ± 0.9	NS
Charity	3.97 ± 1	4.08 ± 1	NS
Patience	3.66 ± 1.1	3.71 ± 1.1	NS
Self-control	3.67 ± 1.1	3.55 ± 1.3	NS
Moral actions	3.83 ± 1.1	4.09 ± 1	0.00
<b>Self-Actualization</b>			
Introspection	3.52 ± 1.1	3.77 ± 1.1	0.014
Purpose of life	3.77 ± 1.1	3.96 ± 1	0.047
Way of life	3.70 ± 1.1	3.88 ± 1	NS
Strengths	3.56 ± 1	3.73 ± 1	NS
Weaknesses	3.48 ± 1.2	3.84 ± 1	0.001
Solutions	3.41 ± 1.1	3.71 ± 1	0.003
End of life	3.65 ± 1.3	3.74 ± 1.4	NS
<b>Self-Realization</b>			
Thoughtlessness	2.15 ± 1.3	2.16 ± 1.2	NS
Yoga	3.16 ± 1.2	2.93 ± 1.3	0.047
Satisfaction	3.64 ± 1	3.59 ± 1.1	NS
Freedom	3.46 ± 1.1	3.45 ± 1.2	NS
Nigum facts	3.49 ± 1.1	3.34 ± 1	NS
Bliss	3.33 ± 1.1	3.46 ± 1.3	NS
Sixth sense	3.50 ± 1.2	3.59 ± 1.3	NS

\* = Student t-test s test of significance.NS = Not significant

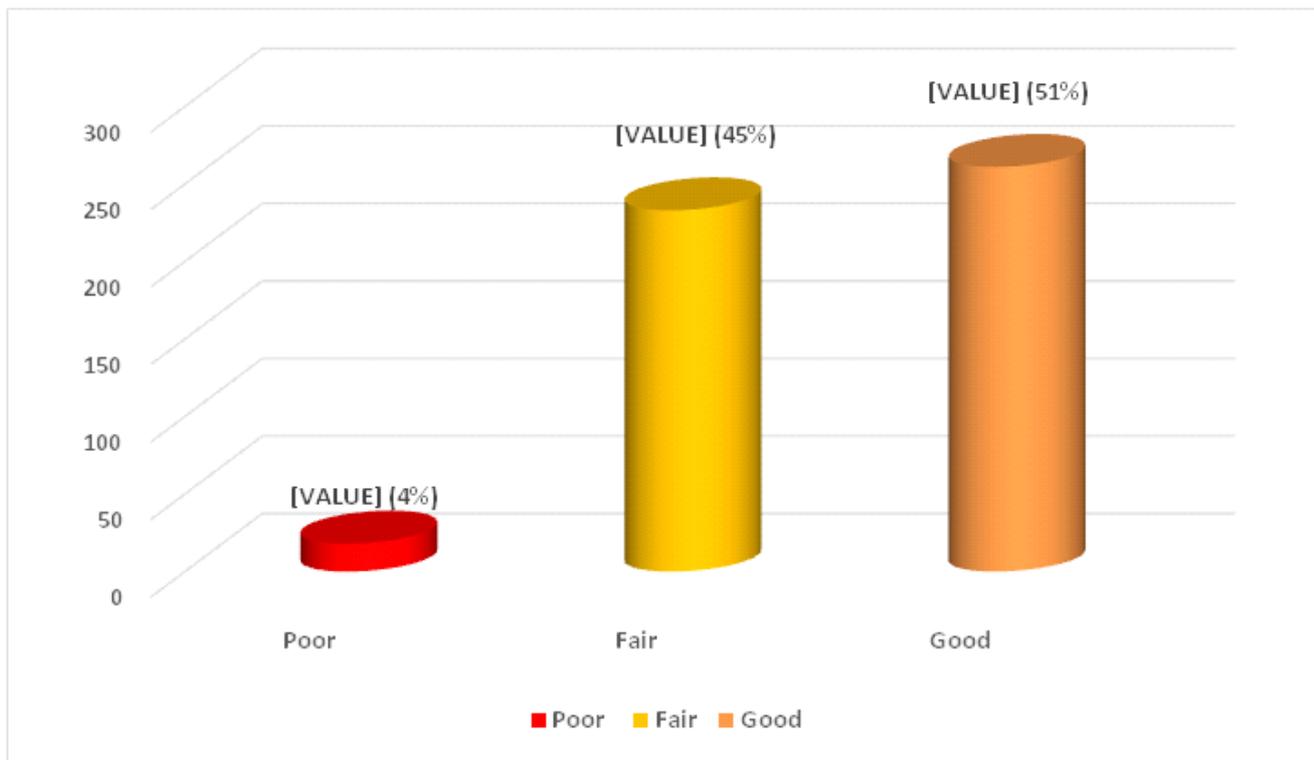


Fig 1. Overall Spiritual Health.

Table 2. Coping status of medical students.

Coping strategies	Coping attributes	f* (%)
Adaptive coping	Active coping	146 (28.6)
	Seeking emotional support	113 (22.1)
	Seeking instrumental support	144 (28.5)
	Planning	142 (27.8)
	Positive reframing	124 (24.3)
Maladaptive coping	Denial	138 (27.0)
	Behaviour disengagement	112 (21.9)
	Substance use	289 (56.6)
	Self-distraction	104 (20.4)
	Self-blame	114 (22.3)
Other common coping strategies	Acceptance	115 (22.5)
	Turning to religion	188 (36.8)
	Humour	178 (34.4)
	Venting	116 (22.7)

\* = multiple responses were given

## Discussion

The present study is probably the first study conducted on spiritual health of medical students in Karachi. The level of spiritual health was measured under three domains i.e. self-development, self-actualization and self-realization, the overall spiritual health of medical students was found to be good (51.1%). A study done in India in 2011 also reported that the (52.0%) of students having good spiritual health<sup>2</sup>. Another study on nursing students of clinical practice grade, reported poor (3.1%), fair (29.7%) and good (56.2%) spiritual health<sup>12</sup>. Nevertheless, spiritual health reflected similarly across studies done among participants of different religious background.

In our study it was found that the adaptive coping strategies that were practiced by most of the medical students were active coping, seeking

emotional support, seeking instrumental support, planning and positive reframing. These findings are similar with a study done on university students reported the same adaptive coping strategies practiced by these students<sup>13</sup>.

Active coping was concentrated on efforts to do something about the situation or taking action to deal with the problem. Students who were dealing with instrumental social support were looking for advice from others having similar experiences or talking to someone who can do something concrete. Students who make a plan of action also try to develop a strategy of what to do in crisis situation. Effective and appropriate coping strategies may minimize the impact of encountered stressful situations on one's wellbeing<sup>14</sup>. This study found that the adaptive coping strategies practiced by the medical students were mostly active coping (28.6%), seeking instrumental support (28.5%) and planning (27.8%). These strategies are positive coping strategies which have been reported in other studies as very adaptive and helps in recovery from distress<sup>15</sup>.

The maladaptive strategies which were used by medical students were denial, behaviour disengagement, substance use, self-distraction and self-blame. The denial done by (27%) students by refusing to believe about its happening. The behavioural disengagement by (21.9%) students done by reducing the amount of effort to solve problems. The maladaptive strategy which was highly prevalent was substance use (56.6%) to feel better or to think less about the situation. Self-distraction and self-blame were practiced by (20.4%) and (22.3%) respectively. In comparison with previous studies from India<sup>16</sup> that reported the use of alcohol, tobacco, and drugs as common coping strategies in medical students, it was alarming to find in our study that substance use was the most common maladaptive coping strategy. This may be related to the students' environment of living away from their parents and family.

This study found that the medical students were using both adaptive coping strategies and

avoidant strategies. However, most of the students are using different kinds of addictive substance which is considered an effective coping attribute in response to stress. A previous study in Nepal<sup>17</sup> showed similar findings. On the contrary, a qualitative study among medical students in Malaysia<sup>18</sup> found active coping strategies as most common way to deal with stressful events and did not report any undesirable coping strategies, such as drinking alcohol and smoking.

In our study, other coping strategies practiced by medical students are acceptance (22.5%), turning to religion (36.8%), humour (34.4%) and venting (22.7%). Other studies have also reported that turning to religion was a common practice by students during crisis<sup>19</sup>.

One of the limitations of this study is that since the study was done in private sector university it cannot be generalized and further studies should be carried out among medical students that can identify the role of spiritual health and different coping strategies.

## **Conclusion**

The study reveals that majority of the medical students have good spiritual health based on their own spiritual experiences. Coping strategies used by medical students during their academics are mainly substance use, active coping and turning to religion for management of stress. It is believed that interactive sessions can further encourage medical students to identify and gauge their stress levels in order to prevent the harmful effects of stress on academic performance.

## **Conflict of Interest**

Authors have no conflict of interest and no grant/funding from any organization.

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