

# Correlation between Religious Beliefs with Mental Health and Academic Performance in Medical Students

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## Abstract

**Background:** Recently, psychologists used the benefits of religion to promote a healthier community and educational status of students due to lots of investigations which indicated the positive effects of religion on mental health and self-regulation of students.

**Objectives:** This study examines religious beliefs among medical students of Bandar Abbas Medical School and its association with their academic performance and mental health.

**Subjects and Methods:** This cross-sectional study was performed on 60 medical student in 2015. Data was gathered through three part questionnaire: demographic characteristics, religious beliefs questionnaire which was designed by Golriz and Baraheni and also the General Health Questionnaire (GHQ-28). The obtained data were statistically analyzed using Pearson correlation coefficient and t-test by SPSS version 19 for windows.

**Results:** There were 54 respondents from the total population of 60 students with a response rate of 90%. Highest percentage of students (38.89%) had good religious beliefs and mental health problem was also diagnosed in 17 (31.5 %) of respondents population. Among subjects, 11 students (20.37%) had "high" scores, 18 students (33.33%) had "good" scores, 15 students (27.78%) had "normal" scores and 10 students (18.52%) had "low" scores.

**Conclusion:** Data analysis indicated a statistically significant positive relationship between the religious belief status of participants and their mental health status and also negative correlation of religiosity with smoking. However, no significant relevance was observed between religious values and academic performance.

**Keywords:** Religion, Medical student, Health, Academic performance

## Background

Anxiety and stress are two major causes of academic failures and health disruptions, nowadays. During the past century, lots of surveys demonstrated that religion holds a central place in reducing anxiety (1, 2). Indeed, a strong faith in religion eliminate anxiety and stress, which leads lots of diseases. Therefore, health psychologists used the benefits of religion to promote a healthier community and educational status of students (3, 4). Based on a study in US, 88% of people describe themselves as religious, roughly the same findings were reported by a brazilian research (5). As regards these beliefs may differ in various communities, the strength and incidence of religious beliefs in populations could be considered in clinical decision making for general health and clinical treatment plans designed by physicians. In this regard, religion and spirituality were included in the training curriculum of medical students and also in their clinical practices (6). In recent years, several researches were carried out worldwide, which examined the effect of religion on treating lots of

mental and physical disease. These studies demonstrated the importance of religious values in prevention, treatment and also post care actions in patients (7-9). On the other hand, medical students usually experience significant levels of pressure and anxiety due to their academic demands. This, also can be another necessity for many medical schools to integrate spirituality into their curriculum (5, 10). Several studies illustrated that religious persons can cope better with negative life events and have more positive attitudes in the time of difficulties which come from their feeling of belonging to the grand source (11, 12). In this regard, universities are related with changes in students lifestyles which can impose them with concussive events. It was also shown that religious students clearly have a lower prevalence of smoking, drinking and illicit relationships (13). In fact, religion plays an important role in self-regulation of students and communicating with God helps them to overcome problems (14). Thus, it is predictable that religious students have higher quality of general health and also better educational status, specially in students

with stressful clinical practices such as medical students. This prognosis was confirmed by several researches worldwide. However, some studies were not found significant correlation or also have reported reverse findings (15, 16). Also, some surveys revealed that religious families are the strictest to be using authoritative child rearing strategies. So their children will be exposed to lots of problems (more than children in non-religious families) if they have less controlled by their parents (14). Since little studies have been performed on medical student's religious attitudes, this research was conducted with an intention of determining the correlation between religious beliefs with general health and academic performance among medical students at Bandar Abbas Medical School, Iran, 2015.

## Materials and Methods

A cross sectional descriptive analytical study was conducted in 2015 in the medical school of Bandar Abbas, Iran among 60 medical students. Participants in this study were chosen by systemic random sampling technique, from the all academic years. Data was gathered through three part questionnaire: part one for demographic characteristics including five questions in relation to sex, age, academic year, average score and smoking. Average score (GPA) was considered as student's academic performance in present study which is a known method to define academic performance in researches (17). The school performance was stratified as high (3.5 or higher), good (3 through 3.49), normal (2 through 2.99) and low (less than 2). Part two was religious beliefs questionnaire which was designed by Golriz and Baraheni (1975) including 25 questions assessing religious beliefs. Scores to each question were performed in five-option Likert scale items from 0 to 4 ranging from totally agree to totally disagree. The 25 component scores are then added to yield a global score in the range of 0 to 100; the higher the score, the better the religious beliefs. Global score equal or lower than 25 would indicated poor religious attitudes, 26-50 scores were considered medium in religious beliefs, 51-75 scores were considered good and finally 76-100 scores categorized as excellent in relation to religious attitudes. Validity and reliability of this questionnaire were calculated 0.80 and 0.63, respectively (18). The General Health Questionnaire (GHQ-28) was used as third part of the questionnaire to detect mental

disorders in present study. This self-administered questionnaire was developed by Goldberg & Hillier (1979) in the form of 28 questions and four subscales including: physical symptoms, anxiety and sleep disorders, social dysfunction, and depression. Each scale contains 7 questions and each question has four options on a Likert scale from 0 to 3. Total score of this questionnaire was in the range of 0 to 84. In contrast with Baraheni questionnaire, the higher score of GHQ-28 demonstrated worse general health of subjects. The questionnaire cutoff point was 23, thus, scores equal to cutoff point and higher scores shows mental health problem. The validity and reliability of the persian version of this questionnaire were assessed by Noorbala et al., 2004 (19). All participants provided written informed consent before enrolment and all information were purely used for this research and those not consenting to participate in the study were excluded. In the beginning, screening for chronic medical or psychiatric illnesses was conducted and students with known chronic medical illnesses that lead to health problems were ruled out from the study. Thereafter, questionnaires were distributed among subjects and after completing the questionnaires, all of them were collected. Incomplete ones were removed from the study (even if an item was unanswered or the answer was ambiguous). The obtained data were statistically analyzed using Pearson correlation coefficient and t-test by SPSS version 19 for windows. A two sided  $\alpha = 0.05$  was considered statistically significant.

## Results

There were 54 respondents from the total population of 60 students with a response rate of 90%. Among this population, 32 of whom (59.26 %) were female and 22 of them (40.74 %) were male and mean age of them was  $21.46 \pm 1.83$ , ranging from 19 to 31 years. When school performance was categorized into high (3.5 or higher), good (3 to 3.49), normal (2 to 2.99) and low (less than 2), 11 students (20.37%) had "high" scores, 18 students (33.33%) had "good" scores, 15 students (27.78%) had "normal" scores and 10 students (18.52%) had "low" scores. Highest percentage of students (38.89%) had good religious beliefs and lowest percentage (11.11%) of students had poor religious attitudes. Mental health problem was also diagnosed in 17 (31.5 %) of respondents population.

<b>Table1. Demographic characteristics of the study population</b>	
<b>Variables</b>	<b>n(%)</b>
<b>Age</b>	
19-21	16(29.63%)
22-24	18(33.33%)
25-27	15(27.78%)
More than 27	5 (9.26%)
<b>Sex</b>	
Male	22(40.74%)
Female	32(59.26 %)
<b>Academic year</b>	
First	5 (9.26%)
Second	13(24.07%)
Third	11(20.37%)
Fourth	8 (14.81%)
Fifth	9 (16.67%)
Sixth	4 (7.41%)
Seventh	4 (7.41%)
<b>Smoking</b>	
Yes	10(18.52%)
No	44(81.48%)
<b>Academic scores (GPA)</b>	
High (3.5 or higher)	11(20.37%)
Good (3 to 3.49)	18(33.33%)
Normal (2 to 2.99)	15(27.78%)
Low (less than 2)	10(18.52%)
<b>Mental health</b>	
Normal	37 (68.5 %)
Abnormal	17 (31.5 %)
<b>Religious beliefs</b>	
Excellent	11(20.37%)
Good	21(38.89%)
Medium	16(29.63%)
Poor	6 (11.11%)

Table 1 demonstrates complete demographic characteristics. Data analysis indicated a statistically significant negative relationship between the religious belief status of participants and their mental health scores ( $p = 0.032$ ). Indeed, students with better religious attitudes had significantly lower scores in mental health GHQ-28 questionnaire and are considered healthier. In addition, it was observed that high grade students also had better religious beliefs. However, this correlation was not statistically significant ( $p > 0.05$ ). On the other hand, a great negative relationship was seen between smoking and religious status of participants. In fact, non-smoker students gained higher scores and revealed better religious attitudes. None of other variables illustrated significant relationship with

scores of Baraheni questionnaire. Table 2 demonstrates complete results of data analysis in this study.

## Discussion

The findings indicated that religious attitude of the majority of medical students at Hormozgan University of Medical Sciences (38.89%) is in good level. This result is coincidence with a study conducted by Kalhor et al in 2014 that showed 53.5% of the students of Kurdistan University of Medical Sciences had good religious beliefs (11). In this regard, Ganji and Hossieni performed a study on the students of Iran University of Medical Sciences in 2010 and determined that 76.9% of them had excellent religious attitudes (20). Moreover, Sadeghi et al reported that religious beliefs of the majority of the students at Mazandaran University of Medical Sciences has been as good or excellent (18). Thus, this result of present study is consistent with previous studies. In this research, high percentage of students (68.5%) had desired mental health which is close to the results of Kalhor et al, in which mental health of the majority (61.4%) of the participants was normal (11). Data analysis in this study showed a significant relationship between religious beliefs and mental health. In other words, students who have religious beliefs are in better mental health status in compare with non-religious ones. Lots of studies were performed on the relationship between religion and mental health. Majority of these studies support the correlation between these two variables. For example, Koenig and et al found that good religious beliefs can make a positive psychological effect in improving mental health (21). On the other hand, two recent studies revealed strong positive association between spiritual beliefs and rates of current depressive disorders whereas they reported a decreased rates of alcohol use among religious persons (22, 23). Interestingly, it is probable when spirituality and religion be used, as a cure for psychological problems. Indeed, individuals with current depression have a tendency to religious values to manage their painful condition (22). In this regard, recent studies indicated the important role of mental health and psychological factors on academic achievements among students (24). Thus, religion can be used to improve mental status of students which can lead to academic promotion. Another main issue on educational status of students, is smoking. Smoking was considered inappropriate for students in many perspective

Variables	Age				Sex		Academic year							Smoking		GPA*				Mental health		Total
	19	22	25	More than	Male	Female	1	2	3	4	5	6	7	No	Yes	H	G	N	L	Norma	Abnorma	
Religious beliefs	-	-	-	than																1	1	
	21	24	27	27																		
Excellent	3	4	4	0	5	6	1	2	2	3	2	1	0	11	0	3	4	3	2	9	2	11
Good	6	8	5	2	9	12	3	5	4	2	3	2	2	19	2	4	8	6	2	15	6	21
Medium	5	5	4	2	6	10	1	4	3	2	3	1	2	12	4	3	4	4	4	11	5	16
Poor	2	1	2	1	4	4	0	2	2	1	1	0	0	2	4	1	2	1	2	2	4	6
Total	16	18	15	5	22	32	5	3	1	8	9	4	4	44	10	1	8	5	0	37	17	54
Test result	p>0.05				p>0.05		p>0.05							p<0.001		p>0.05				p=0.032		

including educational status. Data analysis in present study also illustrated a significant difference in the religious values of smoker and non-smoker students which is in line with a study of Tahlil et al on high school teachers and students in Indonesia. In other words, religious programs is an appropriate item to plan an effective smoking prevention program for students (25). In contrast with above results, no significant correlation was found between academic performance and religious beliefs of medical students. Although religious students had better GPA scores, the difference was not statistically significant. Similar findings were reported by Jeynes (2005), which revealed that religious values have a positive association with school behaviors, such as smoking, alcohol and drug usage, whereas, no significant improvement was observed in student's GPA scores (26). Jeynes conducted another research in this issue in 2003 which demonstrated no differences between Catholic and Protestant students whereas, Christian students showed significant differences between religiosity and religionless (27). Another similar study was carried out by Regnerus and Elder found a positive correlation between academic performance and

church attendance only in poorer neighborhoods (28). Several researches also demonstrated the positive association among all of their participants (29, 30). These different results suggest that various conditions, such as religious nature and the economic situation can influence the correlation between religious beliefs and academic performance of students. Therefore, further investigations are required to clarify this fact.

Based on our results, religious values of students showed no significant relevance with age, gender and also academic level of them, which are in line with two similar studies (20, 31). However, several related studies reported that girls are higher in religious attitudes in compare with boys, due to their personality features (32). Findings of this survey should be reported with caution, since present study was limited in various ways. First, all of the participants were Muslims and it was not possible for us, to include subjects from other religions. Second, there are lots of factors to determine educational status of each students, such as economic situation, marital status and susceptibility to learn in students that were not considered in this

study.

Eventually, we can conclude that religion and spirituality can lead to promotion in mental health of students and protect them against anomalies of the society. In other words, acceptance of God can cause a person to have positive emotions as a protection against mental and also physical illnesses (33).

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## Conflict of Interest

The authors declare that they have no conflict of interests.

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