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A STUDY OF RELATIONSHIP BETWEEN MENTAL HEALTH, EMOTIONAL INTELLIGENCE AND RELIGIOSITY AMONG MUSLIM STUDENTS

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ABSTRACT

This research explored the relationships between mental health, emotional intelligence and religiosity of Muslim students. 382 students (273 females and 109 males) from higher education institutions participated in the study through a random sampling method. These students belonged to both Muslim majority (majorly from Malaysia, Indonesia, Nigeria, the Gambia, Pakistan, GCC) and Muslim minority countries (majorly from India, Ghana, United States). General Health Questionnaire (Goldberg & Hillier, 1979), Emotional Intelligence Questionnaire (Schutte et al., 1998) & IIUM Religiosity Scale (Mahudin, Noor, Dzulkifli, & Janon, 2016) were adapted and used. Results indicated that, there was no significant difference in the religiosity and emotional intelligence of males and females or between students from Muslim majority and Muslim minority countries. However, religiosity and emotional intelligence were lower in the students from non-Islamic Institutes compared to the students from the Islamic Institutes and in students from the younger age group compared to the students from the older age group. At the same time, there was no significant difference in the mental health of the students between the various categories. In

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the vast majority of groups, there was a negative but significant correlation between emotional intelligence and mental health (psychological distress). A positive and significant correlation was found between emotional intelligence and religiosity across all categories. A negative but significant correlation was also found between mental health (psychological distress) and religiosity across all the groups. The findings of the study indicate that religiosity and emotional intelligence is high in Muslim students which can aid in maintaining good mental health. Religiosity and EI can be used as an intervention in clinical settings to alleviate the psychological distress in students.

Keywords: Mental health, Emotional intelligence, Religiosity, Muslim students, Higher education.

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1. INTRODUCTION

The World Health Organization (WHO) defines mental health as "a state of wellbeing in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively, and is able to make a contribution to his or her community" (World Health Organization, 2010). The mental health of the students has become an increasing concern across the globe (Macaskill, 2013). An increase in mental health concerns has been reported among university students. (Latiff et al., 2014; Mohammed et al., 2016, Islam et. al., 2018 & Wathelet et al., 2020). University students have higher levels of mental health concerns in comparison to the general population (Gallagher, 2008; Arsandaux, 2021). These issues are increasing both numerically and in severity (Hunt & Eisenberg, 2010; Fruehwirth, Biswas & Perreira, 2021).

University life is more demanding both intellectually and emotionally. There is an increased level of challenges and pressure along with emotional and social difficulties. (Rodgers & Tennison, 2009). 35% of students fulfilled the diagnostic criteria for at least one common mental health issue in a large-scale survey of 14,000 students from 19 universities in 8 countries (Auerbach et al., 2016). About 44% of graduate students reported that they had stress and emotional issues which affected their academics and well-being (Hyun et al., 2007) and an increase in drop-out rates (Megivern et al., 2003). Reported issues include anxiety, depression, stress and eating disorders (Cooley et al., 2007; Tosevski et al., 2010). About three-quarters of grown-ups with mental health issues have experienced mental health symptoms before the age of 25

(Solmi et al., 2021). Moreover, the COVID-19 pandemic also led to major interruptions in student lives due to social isolation, online learning modes and the closure of colleges and universities. This led to an increase in mental health concerns (Kecojevic et al., 2020; Sun et al., 2021).

Emotional Intelligence (EI) has become progressively crucial in the field of education since it aids in the psychological well-being of students, in dealing with life situations and in educational learning (Petrides, 2016). EI comprises "the abilities to accurately perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotions" (Mayer et al., 2004). There was a disappearance of psychological studies on religion for almost a century (Jones, 1994). Recent times have seen an increasing interest in the psychology of religion (Aghababaei et al., 2016; Emmons & Paloutzian, 2003). Religiosity can be defined as "a particular institutionalized or personal system of beliefs, values, and practices relating to the divine - a level of reality or power that is regarded as the source or ultimate transcending yet immanent in the realm of human experience" (Worden, 2005).

The aim of this study was to examine the relationship between mental health, emotional intelligence and religiosity in Muslim university students. The other categorical variables that were considered in the study were gender, type of institute attended, country of residence and age. To the best of our knowledge, there is no published work with Muslim students considering these variables.

2. REVIEW OF LITERATURE

Past studies have shown a relationship between EI and mental health. A positive correlation exists between EI and mental health among college students (Gupta & Kumar, 2010). Higher levels of EI have been positively associated with psychological well-being, greater life-satisfaction, self-efficacy, self-acceptance and happiness (Bhullar et al., 2012; Ruiz-Aranda et al.,2014). It is also related to life adjustment in university students (Velasco et al., 2006) as well as has a strong, positive correlation with stress coping style EI aids in regulating, expressing and understanding emotional responses during times of stress which is essential for mental health (Lea et al., 2019; Piqueras et al., 2019). It also lowers the risk of suicidal behaviour (Domínguez-García & Fernaandez-Berrocal, 2018). Emotionally intelligent individuals are more likely to be resilient, self-efficacious, less depressed and less anxious (Wapano, 2020). Less use of emotion was related to higher levels of aggression and delinquency (Siu, 2009). Lack of emotional awareness and the failure to manage emotions are important indicators for some impulse control disorders and personality disorders (Matthews et al., 2002).

The effect of religion on mental health has been researched in various studies in the past. Positive associations between the two have been reported in several studies (Moreira-Almeida et al., 2006; Cotton et al., 2010; Leung & Pong 2021). Statistically significant relationships have been reported between religious involvement and improved mental health, increased social support and decreased substance abuse. Longitudinal studies

have reported quicker recovery from depression and increased adaptability to stress (Koenig et. al., 2001). Those who are religious see themselves as self-efficacious and have higher levels of happiness and mental health (Abdel-Khalek & Lester, 2017). They also experience greater well-being and health (Abdel-Khalek & Tekke, 2019). Religiosity is associated with life satisfaction and relieving academic stress (Aftab et al., 2018), meaning in life (George et al., 2002), and better cognitive functioning (Reyes-Ortiz et al., 2008). Positive influence of religion was reported in individuals who were affected by mental disorders (Martins et al., 2022). It is also predictive of fewer negative symptoms of schizophrenia (Mohr et al., 2011), decreased symptoms of post-traumatic stress (Arévalo et al., 2008) and fewer personality disorders (Türkben Polat & Kiyak, 2022). Spiritual well-being was also positively associated with decreased episodes of depression, quality of life, cognitive avoidance and anxiety (Pirl & Roth, 2000). Some studies however report negative or mixed associations (Koenig, 2012).

3. METHODOLOGY

The data were collected using standardized questionnaires which were self-administered. The questionnaire also included demographic details of the participants which included their gender, type of institute: Islamic or non-Islamic, country of residence: Muslim majority or Muslim minority and age. Age was initially considered as a demographic variable and then considered as a categorical variable after the age range was gathered from the data. The questionnaire was circulated online in various colleges and social media platforms.

Mental Health was tested using the General Health Questionnaire (GHQ) which was developed by Goldberg in 1978. It is a widely used test for assessing mental well-being. Various versions of GHQ are available of which GHQ-28 developed by Goldberg and Hillier (1979) was used for this study as it is the most commonly used version of the questionnaire. (Goldberg & Hillier, 1979). Emotional Intelligence (EI) was tested using Emotional Intelligence Scale (EIS). The EIS was developed by Schutte et al. (1998). The scale indicated a high internal consistency (Schutte et al., 1998). Religiosity was tested using the IIUM Religiosity Scale (IIUMReIS). This scale was designed by Mahudin, Noor, Dzulkifli and Janon (2016) and is based on the Hadith of Jibreel (AS) (Mahudin et al., 2016).

4. ANALYSIS

The data was submitted via Google form and recorded in a Google excel sheet which was then analysed using the statistical package for social sciences (SPSS) version 28.0.1.1. Descriptive and inferential statistics were employed to analyse and interpret the data. Descriptive statistics included frequency distributions, percentages and pie charts. The total scores for the three dependent variables were categorized into high, moderate and low. The responses of EIS were based on a 5-point Likert scale whereas the IIUM Religiosity Scale and General Health Questionnaire were based on a 4-point Likert scale. For inferential statistics, the data was first checked for normality using the Kolmogorov-Smirnov test, Shapiro-Wilk Test and the Normal Q-Q plot. The results indicated that the data was not normally distributed hence further analysis was

done using non-parametric tests. Mann-Whitney-U test was conducted to see if there was any significant difference in the independent groups: males/females, Islamic/non-Islamic institutes, Muslim majority/Muslim minority countries and younger/older age groups. The age was sorted into two categories based on the age range obtained while collecting the data. The younger age group was between 14-43 years, and the older age group was between 44-73 years. Spearman's rank order correlation was used to determine the correlation between the three dependent variables: mental health, emotional intelligence and religiosity.

5. RESULTS AND DISCUSSION

The survey was responded to by 382 students. In order to find the level of emotional intelligence, mental health and religiosity in higher education among Muslim students, the total score obtained were classified into three categories: high, moderate and low using descriptive statistics. For emotional intelligence, the range for high was 121-165, for moderate it was 77-120 and for low it was 33-76.

Table 1. Percentage of students having high, moderate and low levels of emotional intelligence

Variable	Levels	Frequency	Percentage
Emotional Intelligence	High (121-165)	264	69.1
	Moderate (77-120)	116	30.4
	Low (33-76)	2	0.5
Total		**382**	**100**

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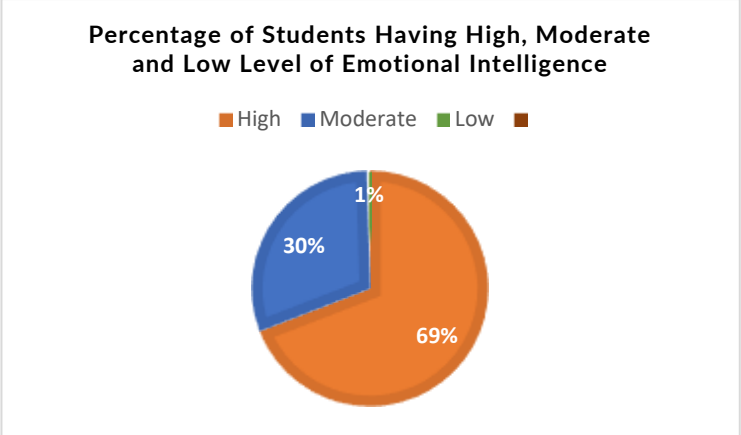

Figure 1. The percentage of students having high, moderate and low level of emotional intelligence represented through the Pie Chart.

From Table 1 and Figure 1, it shows that 69.1% of the students had high levels of emotional intelligence, 30.4% had medium and 0.5% had low levels of emotional intelligence. This was in line with the previous studies done in Muslim student populations (Sulaiman, 2013; Kamal & Ghani, 2014). For mental health, the range for high was 57-84, for moderate it was 29-56 and for low it was 0-28.

Table 3. Percentage of students having high, moderate and low levels of mental health scores

Variable	Levels	Frequency	Percentage
Mental Health	High (57-84)	14	3.7
	Moderate (29-56)	140	36.6
	Low (0-28)	228	59.7
Total		382	100

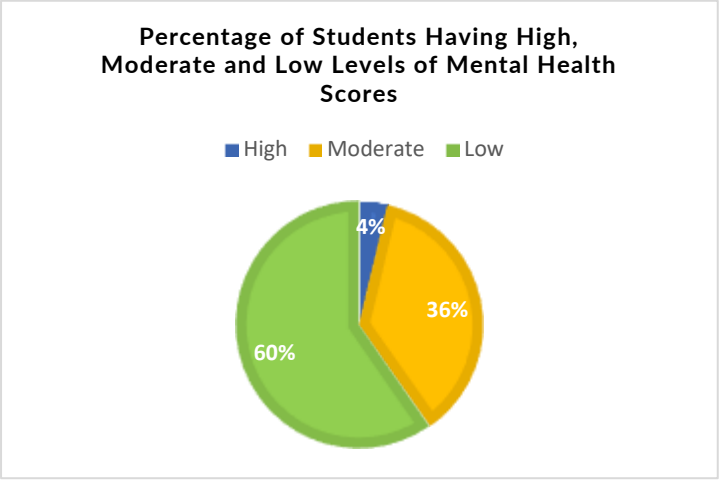

Figure 2. Percentage of students having high, moderate and low levels of mental health scores

From Table 2 and Figure 2, it shows that 3.7% of the students had high levels of mental health issues, 36.6% had medium and 59.7% had low levels of mental health issues. This is in contrast to previous studies (Ratanasiripong, 2012; Misran et al., 2021).

For religiosity, the range for high was 31-40, for moderate it was 21-30 and for low it was 10-20.

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Table 4. Percentage of students having high, moderate and low levels of religiosity

Variable	Levels	Frequency	Percentage
Religiosity	High (31-40)	328	85.9
	Moderate (21-30)	51	13.4
	Low (10-20)	3	0.8
Total		382	100

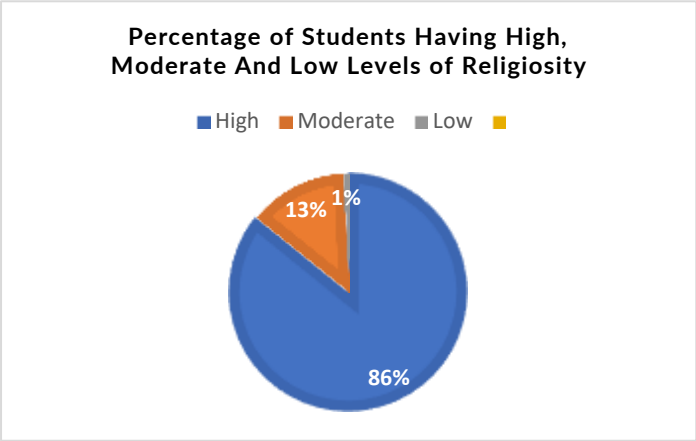

Figure 3. Percentage of Students Having High, Moderate and Low Levels of Religiosity through Pie Chart.

From Table 3 and Figure 3, it shows that 85.9% of the students had high levels of religiosity, 13.4% had medium and 0.8% had low levels of religiosity. This corroborates to the previous studies in Muslim student populations (Zubairu & Sakariyau, 2016; Abdel-Khalek, 2013).

Mann-Whitney U tests were conducted for emotional intelligence, mental health and religiosity between various groups: males/females, students of Islamic institutions/ students of non-Islamic institutions, students from Muslim majority/ students from Muslim minority and students in younger age-group/students in older age-group.

Table 4a: Mann-Whitney U test for comparing Emotional Intelligence between Males and Females (Test Statistics[a])

	Total Score of Emotional Intelligence
Mann-Whitney U	13556.500
Wilcoxon W	50957.500
Z	-1.357
Asymp. Sig. (2-tailed)	.175

a. Grouping Variable: Male and Female

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Table 4b: Mann-Whitney U test for comparing Emotional Intelligence between students of Islamic institutions and non-Islamic institutions (Test Statistics[a])

	Total Score of Emotional Intelligence
Mann-Whitney U	14690.500
Wilcoxon W	25421.500
Z	-2.421
Asymp. Sig. (2-tailed)	.015

a. Grouping Variable: Islamic Institute and Non-Islamic Institute

Table 4c: Mann-Whitney U test for comparing Emotional Intelligence between students of Muslim majority and Muslim minority countries (Test Statistics[a])

	Total Score of Emotional Intelligence
Mann-Whitney U	17281.000
Wilcoxon W	32857.000
Z	-.788
Asymp. Sig. (2-tailed)	.431

a. Grouping Variable: Muslim majority and Muslim minority

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Table 4d: Mann-Whitney U test for comparing Emotional Intelligence between students of younger age-group and older age-group (Test Statistics[a])

	Total Score of Emotional Intelligence
Mann-Whitney U	5059.000
Wilcoxon W	64055.000
Z	-2.495
Asymp. Sig. (2-tailed)	.013

a. Grouping Variable: Age_Groups

From Table 4a, there was no statistically significant difference between males and females on the rating scores for EI, *U* =13556.50, *p* = .18. From Table 4b Mann-Whitney U test indicated that emotional intelligence was lower in the students from non-Islamic Institutes (*Mdn* = 125. *n* =146) compared to the students from the Islamic Institutes (*Mdn* = 128, *n* = 236), *U* = 14690.50, *z* = -2.421, *p* = .015, with a weak effect size *r* = .12. From Table 4c, there was no statistically significant difference between students from Muslim majority and Muslim minority countries on the rating scores for EI, *U* =17281.00, *p* = .43. From Table 4d, Mann-Whitney U test indicated that EI was lower in the students from the younger age-group (*Mdn* = 127. *n* =343) compared to the students from the older age group (*Mdn* = 134, *n* = 39), *U* = 5059, *z* = -2.495, *p* = .013, with a weak effect size *r* = .13.

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Table 5a: Mann-Whitney U test for comparing Mental Health between males and female students (Test Statistics[a])

	Total Score of Mental Health
Mann-Whitney U	14522.000
Wilcoxon W	20517.000
Z	-.366
Asymp. Sig. (2-tailed)	.714

a. Grouping Variable: Male and Female

Table 5b: Mann-Whitney U test for comparing Mental Health between students of Islamic institutions and non-Islamic institutions (Test Statistics[a])

	Total Score of Mental Health
Mann-Whitney U	16178.500
Wilcoxon W	44144.500
Z	-1.001
Asymp. Sig. (2-tailed)	.317

a. Grouping Variable: Islamic Institute and Non-Islamic Institute

Table 5c: Mann-Whitney U test for comparing Mental Health between students of the Muslim majority and Muslim minority countries (Test Statistics[a])

	Total Score of Mental Health
Mann-Whitney U	16197.500
Wilcoxon W	31773.500
Z	-1.795
Asymp. Sig. (2-tailed)	.073

a. Grouping Variable: Muslim majority and Muslim minority

Table 5d: Mann-Whitney U test for comparing Mental Health between students of the younger age-group and older age-group (Test Statistics[a])

	Total Score of Mental Health
Mann-Whitney U	5481.500
Wilcoxon W	6261.500
Z	-1.848
Asymp. Sig. (2-tailed)	.065

a. Grouping Variable: Age_Groups

From Table 5a, there was no statistically significant difference between males and females on the rating scores for mental health, U =15235, p = .71. From table 5b, there was no statistically significant difference between the students of the Islamic institutions and non-Islamic institutions on the rating scores for Mental health, U =18277.50, p = .32. From table 5c,

there was no statistically significant difference between students from Muslim majority and Muslim minority countries on the rating scores for Mental health, U =20058.50, p = .07. From table 5d, there was no statistically significant difference between students from younger age-group and older age-group on the rating scores for Mental health, U =5481.50, p = .07.

Table 6a: Mann-Whitney U test for comparing Religiosity between male and female students (Test Statistics[a])

	Total Score of Religiosity
Mann-Whitney U	14314.500
Wilcoxon W	51715.500
Z	-.581
Asymp. Sig. (2-tailed)	.561

a. Grouping Variable: Male and Female

Table 6b: Mann-Whitney U test for comparing Religiosity between the students of Islamic institutions and non-Islamic institutions (Test Statistics[a])

	Total Score of Religiosity
Mann-Whitney U	14828.000
Wilcoxon W	25559.000
Z	-2.298
Asymp. Sig. (2-tailed)	.022

a. Grouping Variable: Islamic Institute and Non-Islamic Institute

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Table 6c: Mann-Whitney U test for comparing Religiosity between the students of Muslim majority and Muslim minority countries (Test Statistics[a])

	Total Score of Religiosity
Mann-Whitney U	16603.500
Wilcoxon W	32179.500
Z	-1.423
Asymp. Sig. (2-tailed)	.155

a. Grouping Variable: Muslim majority and Muslim minority

Table 6d: Mann-Whitney U test for comparing Religiosity between the students of the younger age-group and older age-group (Test Statistics[a])

	Total Score of Religiosity
Mann-Whitney U	5014.500
Wilcoxon W	64010.500
Z	-2.573
Asymp. Sig. (2-tailed)	.010

a. Grouping Variable: Age_Groups

From Table 6a, there was no statistically significant difference between males and females on the rating scores for religiosity, U =14314.50, p = .56. From table 6b, religiosity was lower in the students from the non-Islamic Institute (Mdn = 35. n =146) compared to the students from the Islamic Institute (Mdn = 36, n = 236), U = 25559, z = -2.298, p = .022, with a weak effect

size *r* = .12. From table 6c, there was no statistically significant difference between students from Muslim majority and Muslim minority countries on the rating scores for religiosity, *U* =19652.50, *p* = .16. From table 6d, religiosity was lower in the students from the younger age-group (*Mdn* = 35. *n* =343) compared to the students from the older age-group (*Mdn* = 38, *n* = 39), *U* = 5014.50, *z* = -2.573, *p* = .01, with a weak effect size *r* = .13.

Table 7: Relationship between emotional intelligence and mental health of higher education Muslim students

Variables	N	Spearman's correlation (r_s)	Significance
Emotional Intelligence and Mental Health	382	-.278**	<.001

**Correlation is significant at the 0.01 level (2-tailed).

Spearman's rank-order correlation (Table 7) was computed to examine the relationships between emotional intelligence and mental health. There was a negative and significant correlation between emotional intelligence and mental health, r_s = -.278, *n* = 382, *p* <.001.

Table 8: Relationship between religiosity and emotional intelligence of higher education Muslim students

Variables	N	Spearman's correlation (r_s)	Significance
Religiosity and Emotional Intelligence	382	.455**	<.001

**Correlation is significant at the 0.01 level (2-tailed).

Spearman's rank-order correlation (Table 8) was computed to examine the relationships between religiosity and the emotional intelligence of higher education Muslim students. There was a positive and significant correlation between religiosity and emotional intelligence, r_s = .455, n = 382, p <.001.

Table 9: Relationship between religiosity and mental health of higher education Muslim students

Variables	N	Spearman's correlation (r_s)	Significance
Religiosity and Mental Health	382	-.244**	<.001

**Correlation is significant at the 0.01 level (2-tailed).

Spearman's rank-order correlation (Table 9) was computed to examine the relationships between religiosity and the mental health of higher education Muslim students. There was a negative and significant correlation between religiosity and mental health, r_s = -.244, n = 382, p <.001.

Table 10: Relationship between mental health and religiosity of higher education Muslim students in various groups

	Variables	N	Spearman's correlation (r_s)	Significance
1	Males	109	-.371**	<.001
2	Females	273	-.264**	<.001
3	Students of Islamic institutions	236	-.308**	<.001
4	Students of non-Islamic institutions	146	-.277**	<.001
5	Students from Muslim Countries	176	-.336**	<.001
6	Students from Non-Muslim Countries	206	-.289**	<.001
7	Students in younger age-group	343	-.311**	<.001
8	Students in older age-group	39	-.154	.348

** Correlation is significant at the 0.01 level (2-tailed).

Spearman's rank-order correlation (Table 10) was conducted to examine the relationships between mental health and religiosity in various categories of higher education Muslim students. The observed r_s value of mental health and religiosity was -.371 for males and -.264 for females. For students of Islamic institutions, it was -.308 and for students of non-Islamic institutions, it was -.277. For students from Muslim countries, it was -.336; for non-Muslim countries, it was -.289. For students in the younger age-group it was -.311 and for those in the older age-group, it was -.154. it shows a negative correlation but significant relationship between mental health (higher scores on the General Health Questionnaire indicate psychological problems or distress) and religiosity amongst higher education Muslim students in the various categories.

Table 11: Relationship between emotional intelligence and mental health of higher education Muslim students in various groups

	Variables	N	Spearman's correlation (r_s)	Significance
1	Males	109	-.333**	<.001
2	Females	273	-.351**	<.001
3	Students of Islamic institutions	236	-.322**	<.001
4	Students of non-Islamic institutions	146	-.388**	<.001

5	Students from Muslim Countries	176	-.449**	<.001
6	Students from Non-Muslim Countries	206	-.271**	<.001
7	Students in younger age-group	343	-.369**	<.001
8	Students in older age-group	39	-.087	.600

** Correlation is significant at the 0.01 level (2-tailed)

Spearman's rank-order correlation (Table 11) was conducted to examine the relationships between emotional intelligence and mental health in various categories of higher education Muslim students. The observed r_s value of emotional intelligence and mental health was -.333 for male and -.351 for females. For students of Islamic institutions, it was -.322 and for students of non-Islamic institutions, it was -.388. For students from Muslim countries, it was -.449 and for students from non-Muslim countries, it was -.271. For students in the younger age-group it was -.369 and for those in the older age-group, it was -.087. it shows that there was a negative correlation but significant relationship between emotional intelligence and mental health (higher scores on the General Health Questionnaire indicate psychological problems or distress) amongst higher education

Muslim students in all groups, except for students in the older age-group where the correlation was not significant.

Table 12: Relationship between emotional intelligence and religiosity of higher education Muslim students in various groups

	Variables	N	Spearman's correlation (r_s)	Significance
1	Males	109	.585**	<.001
2	Females	273	.417**	<.001
3	Students of Islamic institutions	236	.497**	<.001
4	Students of non-Islamic institutions	146	.384**	<.001
5	Students from Muslim Countries	176	.469**	<.001
6	Students from Non-Muslim Countries	206	.459**	<.001
7	Students in younger age-group	343	.461**	<.001

8	Students in older age-group	39	.494**	.001

** Correlation is significant at the 0.01 level (2-tailed)

Spearman's rank-order correlation (Table 12) was conducted to examine the relationships between emotional intelligence and religiosity in various categories of higher education Muslim students. The observed r_s value of emotional intelligence and religiosity was .585 for males and .417 for females. For students of Islamic institutions, it was .497 and for students of non-Islamic institutions, it was .384. For students from Muslim countries, it was .469; for non-Muslim countries, it was .459. For students in the younger age-group it was .461, and for those in the older age-group, it was .494. It shows a positive correlation but significant relationship between emotional intelligence and religiosity amongst higher education Muslim students in various groups.

The results are supportive of the previous research that showed a negative correlation between EI and psychological distress (Extremera & Fernandez-Berrocal, 2006; Zhang et. al., 2016; Asad Ali Shah et. al., 2018). and between religiosity and psychological distress (Richards & Bergin, 2005; Williams & Sternthal, 2007; Coelho-Júnior et. al., 2022). The results are also supportive of the positive correlation between EI and religiosity (Liu, 2010; Łowicki & Zajenkowski, 2016; Firdaos, 2017).

6. CONCLUSION

The results of the study indicate that religiosity can be used as a means of coping and alleviating psychological distress. It can also be used to increase students' emotional intelligence, which will also aid in maintaining good mental health. Positive religious coping methods such as positive religious reframing of stressors and spiritual support, will aid in better mental health of the students. It is essential for policymakers in the field of education and mental health to focus on building a solid foundation of religiosity in students. Various aspects of religiosity can be used collaboratively in clinical settings and therapy for students. Implementation of religious education will also aid in positively influencing mental health. EI programs can be used by educators, counsellors, and parents to enhance good mental health. Institution-based mental health and EI education, and promotion strategies can increase the benefits of religious education by laying emphasis on the effective implementation of religious education to have a positive influence the mental health and EI of students.

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