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Quranic Circles Attendance: A Tool for Stress Relief Among Malaysian Medical Students?

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Abstract
Medical students may attend Quranic Circles (QC) to cope with stress. Study objectives were to determine its prevalence and investigate its relationship with students' perception of stress and quality of life (QoL). 339 students responded. 78.8% were female and median age was 22. 118 (34.8%) students reported higher stressor levels. 73% attended QC at least a few times a month. They had high spirituality/religiosity (S/R) scores (mean Duke University Religion Index (DUREL) score = 22.43 $\pm$ 3.23). They have lower stressor levels, higher S/R scores, and better QoL. Clinical year students recorded a better QoL than the pre-clinical year students.

Keywords: Malaysia, Medical students, Quranic Circles, Stress

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1.0 Introduction

Medicine may be among the highly demanding undergraduate courses. Its packed schedule leads to a stressful situation that may harm students' well-being (Goncalves et al, 2017). The definition of stress is generally accepted as "the body's nonspecific response to demands made upon it, or to disturbing events from the environment" (Rosenham & Seligman, 1989; Selye, 1974), as cited by Othman, Farooqui, Yusoff, and Adawiyah (2013).

Ganesan, Talwar, Fauzan, and Oon (2018) quoted Yusoff (2010) in dividing stress into two categories. The first category, 'Eustress', is positive stress that motivates an individual to continue working. This good stress encourages learning where an ideal stress level can boost learning ability. The second category, 'Distress', is negative stress which occurs when the good stress becomes too much to handle. This negative stress prevents and suppresses learning and must be stopped and avoided.

Fares, al-Tabosh, Saadeddin, ElMouhayyar, and Aridi (2016) also stated that stress results in "the feelings of fear, incompetence, uselessness, anger, and guilt, that can be associated with both psychological and physical morbidities". In the context of medical schools, stress may also drastically affect the medical student's life satisfaction, resulting in unprofessional conduct, serious thoughts of dropping out, and increased risk of suicidal ideation (Dyrbye, Thomas, Power and Durning, 2010).

The level of medical students' stress differs from country to country. Fares et al (2016) mentioned that stress level among medical students varies from 92% in Pakistan, and 20.9% in Nepal (Fares et al, 2016). In Europe and the United States of America, medical students' stress levels were in the range of 25% to 58%, respectively. However, the studies mentioned were conducted at different time

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intervals, over a period spanning three decades, with no documented use of a standard instrument to measure stress in all the studies. Locally, the prevalence of stress among Malaysian medical students in public universities in recent years was 48.6% in Universiti Kebangsaan Malaysia (Salam et al, 2015), 26% in Universiti Putra Malaysia (Minhat and Alawad, 2019), and 33.3% in Universiti Malaysia Sabah (Musiun et al, 2019) respectively.

There are many reported causes of stress among medical students, but the work by Yusoff, Rahim, and Yaacob (2010) encompasses most, if not all, possible causes. The source of stress for medical undergraduate programmes can be categorised into six domains or 'stressors'. These stressors are academic-related, intrapersonal and interpersonal-related, teaching and learning-related, social-related, drive and desire-related, and group activities-related stressors. A more recent study has suggested a different approach toward medical students' stressors. Mosquera et al (2021) divided the stressors into 'Social Challenges', 'High Activation', and 'Low Activation'. 'Social Challenges' describes any inept feeling concerning the circumstances of his/her surroundings. 'High Activation' describes the medical students' reactions as 'high energy' responses, such as being unable to relax, being overly self-critical, and feeling overwhelmed. The third stressor, 'Low Activation', described the medical students' feelings which resulted in 'low energy' responses such as feeling hopeless, depressed, having difficulty motivating oneself, and feeling like dropping out of school. For this study, stressors, as defined by Yusoff et al (2010), is used.

According to Soliman (2013), coping strategies refer to "the specific efforts that people use to master, reduce, tolerate or minimize stressful events". Specific coping mechanisms tailored to individuals may significantly reduce or overcome the stress experienced by medical students. Ganesan et al (2018) quoted Adler and Park (2003) in saying that "appropriate and effective coping may buffer the effect of stressful circumstances on the physical and mental health of an individual". Some people cope by using substances like drugs and alcohol, whereas others may resort to overeating and smoking. On the other hand, some medical students cope with stress by exercising, meditating, and listening to music.

Another accepted way to find stress relief is through religious activities and spirituality. Goncalves et al, (2017) defined religiousness as "the experience of an organized system of beliefs and symbols shared between a group of people and presenting special behavioural, social, and doctrinal characteristics". Religiousness can be understood as having organisational, non-organisational and intrinsic factors. Intrinsic factors may also mean one's spirituality. Spirituality is "the personal search for answers and meaning to existential matters, involving the understanding of the purposes of life and its possible connections with transcendence" (Goncalves, 2017). Performing yoga, religious observance, prayer, meditation, or a belief in a higher power are examples of spiritual acts. For others, it may be linked to nature, music, art, or a supportive community ("Mayo Clinic", 2019; A Rahman et al, 2013; Yusoff et al, 2011).

Attending Quranic Circles (QC) can be regarded as a religious activity, performed by a group of individuals to attain spiritual fulfilment. These gatherings are usually led by an individual more versed in the Quranic or Islamic knowledge and attended by 6-10 members. QC is also called a study circle, halaqah, or usrah in other places. The ultimate aim is to inculcate a heightened sense of spiritual wellbeing and an increased level of Islamic knowledge and mannerism in the attendees (Hasina, Atiquil Islam, & Serazul Islam, 2014). The secondary objective of the QC is for the attendees to develop a sense of friendship and community support from fellow attendees. The QC, whether formal or informal, are perceived to be a common phenomenon in Malaysia, especially in boarding schools (Shamsul, 2010). The Universiti Teknologi MARA (UiTM) Medical School mainly consists of Muslim students. Extracurricular activities, such as attending Islamic lectures and QC, were done voluntarily. Various student bodies in the faculty organise these activities for their members.

This study sought to determine the prevalence of QC attendance in the UiTM Medical School. It aims to compare perceived stress, religiosity and spirituality scores, and lastly, quality of life between QC attendees and those who do not in this medical institution. There is a paucity of research on assessing QC as a potential spiritual coping strategy for medical students facing stress. Previous studies have focused on the assessment of stressors and their psychological consequences (namely depression, anxiety, and stress) in undergraduate medical students. However, the construct of the study will not be able to determine any causal relationship or effectiveness of QC as a tool to reduce stress for the medical student.

2.0 Methodology

This was a single centre cross-sectional study involving Year 1 to Year 4 medical students from the Faculty of Medicine, Universiti Teknologi MARA (UiTM), Malaysia. Year 5 students were excluded from the study as they were nearing their final professional examination during the data collection period.

The total number of Year 1 to Year 4 students registered with the Medical Faculty in the 2014/2015 academic session was 866. The sample size was based on the formula used by Krejcie & Morgan in their 1970 article "Determining Sample Size for Research Activities" on the Research Advisors website. To obtain a 95% confidence interval, with a 5% margin of error, a total of 278 students were needed to complete the questionnaires. Convenience sampling was done due to logistic and timing constraints.

The instrument used in this study was a set of questionnaires that consisted of 2 parts. The first part was on the demographic data of the students. The second part consisted of 3 validated questionnaires assessing spirituality and religiosity (Duke University Religion Index, DUREL) (Koenig & Büssing, 2010), medical student stressors (Medical Student Stressor Questionnaire, MSSQ) (Yusoff et al, 2011), and quality of life (World Health Organisation Quality of Life brief version, WHOQOL-BREF) ("World Health Organisation", 1998).

The first part of the questionnaire collects information on gender, race, religion, year of study, estimated monthly household income, previously in boarding school, and QC attendance.

DUREL questionnaires in the English and Malay languages, assessed spirituality and religiosity. The DUREL is a five-item instrument, assessing three dimensions of religiosity. These dimensions are organisational religious activity (ORA), non-organisational religious activity (NORA), and intrinsic religiosity (IR). Intrinsic religiosity is loosely defined as 'spirituality'. The items were rated using a Likert Scale with a score ranging from 5 to 27, the higher the score, the more spiritual and religious the person is. A cut-off point of 16, was used to denote whether a student was 'less spiritual/religious' or 'more spiritual/religious. The overall scale has high test-retest reliability (intra-class correlation = 0.91) and high internal consistency (Cronbach's α = 0.78–0.91). (Koenig & Büssing, 2010; Nurasikin et al, 2010).

The Medical Students Stressor Questionnaire (MSSQ) measures the relative stress level among medical students. The items in MSSQ represent 40 possible sources of stress in medical students, which are identified from the literature and grouped into six main domains; Academic Related Stressor (ARS), Intrapersonal and Interpersonal Related Stressor (IRS), Teaching and Learning Related Stressor (TLRs), Social Related Stressor (SRS), Drive and Desire Related Stressor (DRS), and Group Activities Related Stressor (GARS). Respondents rated each source of stress by choosing from five responses, 'causing no stress at all', 'causing mild stress', 'causing moderate stress', 'causing high stress', and 'causing severe stress'. The scoring method assigns marks from 0 to 4 to each response. The mean score was then calculated, with the higher the mean, the higher the stress level. A cut-off point of 2, was used to denote whether a student has 'lower stressor scores' or 'higher stressor scores'. The reliability coefficient of the stressor group, ranged from 0.64 to 0.92 (Yusoff et al, 2011).

The WHOQOL-BREF questionnaire is a brief and useful instrument to measure quality-of-life. The WHOQOL-BREF consists of four domains: physical health (7 items), psychological health (6 items), social relationships (3 items), and environment (8 items). Respondents rated 24 statements from 5 responses in a Likert Scale, and the marks transformed to give a total score ranging from 100-400, with the higher score translating to a better quality of life. A cut-off point of 200, was used to denote whether a student has 'less quality of life' or 'better quality of life'. The WHOQOL- BREF has good reliability (Cronbach alpha 0.66 to 0.84), internal consistency, construct validity, and dimensional structure for use in well and unwell individuals, including for use in Malaysia ("World Health Organisation", 1998; Abdullah Bandar, Jani, & Karim, 2014).

The 'Statistical Package for the Social Science' (SPSS) software, version 21, was used for data analyses. Missing data accounted for less than 1% of the overall data and substituted with the mean value. Descriptive statistics were applied for demographic data, the spirituality and religiosity scores, medical stressors scores, and quality of life scores. Chi-square tests were then applied to analyse the relationship between the variables.

3.0 Results

A total of 339 questionnaires were analysed. Of these, 267 (78.8%) were female and 72 (21.2%) were male. The median age was 22 (range 19-26 years). The majority of students were Malay (99.1%) with only 1 (0.3%) Indian and 2 (0.6%) students from other ethnicities. All students were Muslims (100.0%). Table 1 shows the demographics of the students.

Table 1: Demographics of Students (n=339)

	No (%)[a]
Age	22 (range 19-26 years)
Sex	
Female	267 (78.8)
Male	72 (21.2)
Ethnicity	
Malay	336 (99.1)
Indian	1 (0.3)
Others	2 (0.6)
Year of Study	
1st Year	129 (38.1)
2nd Year	59 (17.4)
3rd Year	75 (22.1)
4th Year	76 (22.4)
Family Monthly Income (RM)	
Less 1000	39 (11.5)
1001 – 5000	154 (45.4)
5001 – 10000	103 (30.4)
Above 10000	43 (12.7)
Attended Boarding School	
Yes	173 (51.0)
No	166 (49.0)

[a] *unless otherwise stated*

3.1 Quranic Circle (QC) attendance and Spirituality/Religiosity (S/R) Score:

From the study, the majority (152/188, 80.9%) of pre-clinical students surveyed attended religious activities, including QC, a few times a month. The majority (96/151, 63.6%) of clinical year students surveyed attended religious activities once a week. The students surveyed had high spirituality/religiosity scores (mean DUREL = 22.43 ± 3.23). Most QC attendees were females (59.6%), in the pre-clinical years, had been to a boarding school, and came from a family with a monthly income of less than RM5000 per month. They reportedly have lower stressor levels, higher scores for spirituality and religiosity, and a better quality-of-life. However, not all showed significant differences between the groups. Table 2 shows the characteristics of students attending Quran Circles.

Table 2: Students' Quran Circle Attendance status (QC) (n=339)

	Attended QC (%Total)	Did not attend QC (%Total)	p-value[a]
Sex			
Female	202 (59.6)	65 (19.1)	**0.046**
Male	46 (13.6)	26 (7.7)	
Year of Study			
Preclinical (Yr 1&2)	152 (44.8)	36 (10.6)	**0.000**
Clinical years (Yr 3&4)	96 (28.4)	55 (16.2)	
Socio-economic background			
Lower-middle class	143 (42.2)	50 (14.7)	**0.654**
Upper-middle class	105 (31.0)	42 (12.1)	
Boarding School			
Yes	132 (39.0)	41 (12.1)	**0.182**
No	116 (34.2)	50 (14.7)	
Stressor Level			
Lower stressor level	161 (47.5)	60 (17.7)	**0.862**
Higher stressor level	87 (25.7)	31 (9.1)	
Spiritual/Religious (S/R)			
Less S/R	10 (3.0)	15 (4.4)	**0.000**
More S/R	238 (70.2)	76 (22.4)	
Quality of Life (QoL)			
Less QoL	58 (17.1)	14 (4.1)	**0.110**
Better QoL	190 (56.0)	77 (22.7)	

[a] Chi-Square

3.2 Stressor Level:

Of the 339 students, 118 (34.8%) reported higher stressor levels. The stressor level of medical students in this study was moderate (Mean MSSQ = 1.788 ± 0.560). Academic Related Stressors (ARS) caused the highest stressor level (Mean ARS = 2.090 ± 0.580). All the other stressors caused moderate stress for the students. Table 3 shows the mean scores of stress for each domain.

Table 3: Medical Student Stressor Questionnaire (MSSQ) scores (n=339)

MSSQ	**Mean score ± SD**
Total MSSQ	1.79 ± 0.56
Academic Related Stressors (ARS)	2.09 ± 0.58
Inter and Intrapersonal Related Stressors (IRS)	1.90 ± 0.70
Group Activities Related Stressors (GRS)	1.81 ± 0.73
Teaching and Learning Related Stressors (TLRS)	1.74 ± 0.63
Social Related Stressors (SRS)	1.67 ± 0.60
Drive and Desire Related Stressors (DRS)	1.52 ± 0.84

Lower stressor level:		**Higher stressor level::**	
0 – 1.00	= cause mild stress	2.01 – 3.00	= cause high stress
1.01 – 2.00	= cause moderate stress	3.01 – 4.00	= cause severe stress

Female students scored lower stressor scores compared to male students (MSSQ = 1.74 + 0.54 vs 1.98 + 0.58) (p=0.001) as were students in the clinical years compared to pre-clinical students (MSSQ =1.66 + 0.55 vs 1.89 + 0.55) (p=0.000) (see Table 4). Not surprisingly, students who felt they had better quality of life had lower stressor level compared to those who felt they had lower quality of life (MSSQ = 1.75 + 0.55 vs 1.94 + 0.57) (p=0.016).

Table 4: Stressors of Pre-clinical and Clinical Year Students (n=339)

MSSQ	**Pre-Clinical Years (n=188) Mean score ± SD**	**Clinical Years (n=151) Mean score ± SD**	**p-value**
MSSQ	1.89 ± 0.55	1.66 ± 0.55	0.000
ARS	2.16 ± 0.56	2.01 ± 0.56	0.021
IRS	2.05 ± 0.68	1.72 ± 0.69	0.000
GRS	1.86 ± 0.77	1.75 ± 0.67	0.150
TLRS	1.83 ± 0.61	1.62 ± 0.63	0.002
SRS	1.80 ± 0.56	1.50 ± 0.61	0.000
DRS	1.62 ± 0.85	1.39 ± 0.80	0.011

MSSQ = Medical Student Stressor Questionnaire. ARS = Academic Related Stressors. IRS = Inter and Intrapersonal Related Stressors. GRS = Group Activities Related Stressors. TLRS = Teaching and Learning Related Stressors. SRS = Social Related Stressors. DRS = Drive and Desire Related Stressors.

There were no significant differences in perceived stressor levels between students attending QC and those who did not. The majority (59%) of students showed higher spirituality/religiosity (S/R) scores with lower stressor levels. Table 5 shows the relationship between S/R scores with their respective stressor level.

Table 5: Spirituality/Religiosity (S/R) scores and stressor level (n=339)

	Lower S/R level (%Total)	Higher S/R level (%Total)	p-value[a]
Stressor Level			**0.040**
Lower stressor level	21 (6.2)	200 (59.0)	
Higher stressor level	4 (1.2)	114 (33.6)	

a Chi-Square

3.3 Quality of life (QoL):

The students in this survey had a good quality of life (WHOQoL = 243 $\pm$ 42). Female students rated their QoL better than male students (WHOQoL = 245 $\pm$ 40 vs 236 + 47) although this was not significant. Students in the clinical years rated better QoL compared to the pre-clinical year students (WHOQoL = 250 $\pm$ 42 vs 238 $\pm$ 41) (p=0.009). There were no significant differences in quality of life between students attending QC and those who did not.

4.0 Discussion

4.1 Quranic Circle (QC) attendance and Spirituality/Religiosity (S/R) Score:

The students surveyed in this study are all Muslims and had fairly high S/R scores, especially those studying in the clinical years. However, there was no significant association between students attending QC and level of S/R. Interpretation can either be one of two possibilities: 1) Those who are more spiritual/religious attend Quran circles, and 2) Those who attend Quran circles become more spiritual/religious.

QC attendance may confer a simple and effective prescription against transient anxiety as elaborated by El-Nadi (2019). A common prayer for Muslims read "O Allah, make the Qur'an the life of my heart, and a departure for my sorrow and a release for my anxiety". The Prophet Muhammad (peace be upon him) said: "No person suffers any anxiety or grief and says (this supplication) but Allah will take away his sorrow and grief, and give him in their stead joy".

4.2 Stressor Level:

This study showed no significant relationship between attending Quran classes and stressor scores. Interpretation can vary, but one alternative is that: stress among medical students is multifactorial and complex, that attending Quran circles alone is insufficient to alleviate stress. It may be that QC contributes in a different dimension, e.g., giving a sense of meaning to what they are doing or giving motivation but not relieving stress.

It is also interesting to note that, the pre-clinical year students who attended QCs, recorded higher scores of stressor levels. Students in the clinical years may be more matured and have adapted to medical student life, hence the lower stressor level. They may have found meaning in QC attendance, and thus now, did so willingly and not because of peer pressure.

Interestingly, in studying the relationship between spirituality/religiosity (S/R) scores and perceived stressor level, we found that there are significant relationships. As expected, the majority of students with higher S/R scores had lower stressor scores. However, the study also found that a proportion of students with higher S/R scores also had higher stressor levels. This can be interpreted as either 1) Those who are more religious experience a higher level of stress; or 2) Those who are more stressful resort to religious activities like attending QCs as a way of coping, which is probably the case in this study.

4.3 Spirituality/Religiosity (S/R) scores and Quality of Life (QoL):

This study showed that there was no significant relationship between S/R scores and QoL. This may be because QoL is a very broad concept, encompassing many domains. The domains may include health, socio-economics, living environment, human relationship, and others. Religiosity is only one aspect, and no matter how religious one is, QoL cannot improve if there are many physical, economic, and social problems around. Also, lack of association can be due to the different interpretations of spirituality and religiosity by medical students. Some people perceive religion as more of rituals (or restricted to certain areas in life) while others try to incorporate religion into a wider perspective of their lives.

4.4 Strength, limitations and suggestions:

This study gained adequate statistical power. It gave us some insights on the level of S/R, causes of stress, and QoL of the students. However, this study is not without its limitations. Besides being conducted at one institution, the QC and the QC leaders in this study were not standardised. Furthermore, the study site enrols students from the Bumiputra category, the majority of which are Muslims. To

conduct this study in other medical schools, a standardised spiritual-enhancement programme may need to be developed and validated. The programme needs to ensure that the cognitive, affective and psychomotor aspect is addressed to achieve the desired objectives of a QC.

Qualitative studies should be conducted to explore how medical students perceive S/R, stress, and its many coping mechanisms including QC. Studies to validate QC attendance as a coping mechanism in dealing with stress among medical students need to be performed.

5.0 Conclusions:

From this study, QC attendance among medical students from this study is high. Medical students who joined religious activities like the QC have higher scores for spirituality/religiosity and lower stressor level. Clinical year students recorded a better quality of life than the pre-clinical year students, as do students who attended QCs although this was not significant. Some students may have been peer-pressured into attending the QCs to conform to the majority.

The faculty may need to explore factors associated with the higher stressor levels among the pre-clinical year students. This may include activities to help them better adapt to changes in a university environment and of that of a medical degree course. The difference between pre-clinical and clinical students' perception of stressors gives the faculty valuable insight on how to help address stress among the students across the years of study.

The world is only starting to recover from the COVID 19 pandemic. The faculty may wish to determine the stressor levels among its students. With growing evidence from the literature, there may be some role of spiritual self-enhancement as one of the many coping strategies to overcome stress among medical students. QC should be encouraged, with some supervision, to ensure that the activity can achieve its objectives.

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Conflict of interest

The authors declare that they have no conflict of interest.

References

Abdullah Bandar, N.F., Jani, R. & Karim, M.A. (2014). Psychometric Properties of the WHOQOL-BREF Questionnaire among Disabled Students in Malaysian Higher Learning Institutions. Applied Research Quality Life 9 (3): 469-478.

Aldrin Musiun, Khamisah Awang Lukman, Mohammad Saffree Jeffree, Fredie Robinson, Mohd Rohaizat Hassan, Hasanain Faisal Ghazi, Al-abed Ali Ahmed Al-abed, Naing Oo Tha, Swe, & Shamsul Bahari Shamsudin. (2019). Prevalence of Stress and its Associated Factors Among Medical Students in Sabah, Malaysia Borneo. Malaysian Journal of Public Health Medicine, 19(2), 116-125. https://doi.org/10.37268/mjphm/vol.19/no.2/art.179

Dyrbye L, Thomas MR, Power D, Durning SJ, 2010. Burnout and Serious Thoughts of Dropping Out of Medical School: A Multi-Institutional Study. Academic medicine: journal of the Association of American Medical Colleges 85(1):94-102. DOI: 10.1097/ACM.0b013e3181c46aad

El-Nadi (2019) in *Islam's view on Depression*. Retrieved from: http://www.balancedleader.net/psychology/depressed.html.

Fares J, AlTabosh H, Saadeddin Z, ElMouhayyar C, Aridi H. (2016). Stress, Burnout and Coping Strategies in Preclinical Medica‌l Students. North American Journal of Medicine & Science. 8(2): 75–81. d*oi: 10.4103/1947-2714.177299.*

Ganesan Y, Talwar P, Fawzan N, Oon YB (2018). A Study on Stress Level and Coping Strategies among Undergraduate Students. Journal of Cognitive Sciences and Human Development. Vol. 3(2).

Gonçalves, JRL., Jorge. AP, Zanetti, JC, Amaro, EdA., Tótoli, RT., Lucchetti, G. (2018). Religiousness is associated with lower levels of anxiety, but not depression, in medical and nursing students. Revista da Associação Médica Brasileira 64(6): 537-542.

Hasina, B.S., Atiquil Islam, A.Y.M., Serazul Islam, M. (2014). Development and Validation of the Study Circle Model in Higher Education: The Application of Structural Equation Modeling. (2)3: 2289 – 4489. Retrieved from:: http://mojem.um.edu.my.

Koenig, H.G., Büssing, V. (2010). The Duke University Religion Index (DUREL): A Five-Item Measure for Use in Epidemiological Studies. Religions. 1:78-85.
Krejcie, Morgan (1970) "Determining Sample Size for Research Activities. (*Educational and Psychological Measurement*, #30, pp. 607-610)

Minhat HS, Alawad TA, (2019). Risks of Mental Problems Among Medical Students in a Public University in Malaysia. Malaysian Journal of Medicine and Health Sciences. 15(SP3): 65-69.

Mosquera MJ, Kaat AJ, Ring M, Agarwal G, Glickson S, Victorson D (2021). Psychometric Properties of a New Self-Report Measure of Medical Student Stress using Classic and Modern Test Theory Approaches. Health Qual Life Outcomes 19:2 https://doi.org/10.1186/s12955-020-01637-0

Nurasikin M, Aini A, Aida SA, Ng C. (2010). Validity and Reliability of the Malay Version of Duke University Religion Index (DUREL-M) Among a Group of Nursing Students. Malaysian Journal of Psychiatry. 02: 10-12.

Othman CN, Farooqui M, Yusoff MSB and Adawiyah R (2013). Nature of Stress among Health Science Students in a Malaysian University. Procedia - Social and Behavioral Sciences 105 (2013) 249 – 257.

Salam A, Raynuha M, Amir AR, Norsyaqah A, Aimi Aqilah AH, Pei Shan C. Stress among First and Third Year Medical Students at University Kebangsaan Malaysia (2015). Pakistan Journal of Medical Science. 31(1):169-173. doi: http://dx.doi.org/10.12669/pjms.311.6473

Shaikh, B., Kahloon, A., Kazmi, M., Khalid, H., Nawaz, K., Khan, N. A., Khan, S. (2004). Students, Stress and Coping Strategies: A Case of Pakistani Medical School. *Education for Health, 17*(3), 346- 353.

Shamsul, A.B.,(1995). Inventing Certainties. In Wendy James (Ed). *In the Pursuit of Certainty. Religious and cultural Formulations*. 111-132.

Soliman M (2013), Perception of stress and coping strategies by medical students at King Saud University, Riyadh, Saudi Arabia. Journal of Taibah University Medical Sciences (2014) 9(1), 30–35.

The Research Advisors website. Retrieved from: https://www.research-advisors.com/tools/SampleSize.htm

Yusoff MSB, Rahim AFA, Yaacob MJ (2010). The Development and Validity of the Medcal Student Stressor Questionnaire (MSSQ). ASEAN Journal of Psychiatry, Vol.11 (1): Jan – June 2010.

Yusoff, M.S.B., Liew, Y.Y., Ling, H.W., Tan, C.S., Loke, H.M., Lim, X.B., Abdul Rahim, A.F. (2011). Study on stress, stressors and coping strategies among Malaysian medical students. International Journal of Students' Research. 1(2): 45-50.