

# Resilience and sense of belonging among medical students in a Malaysian public university

Sallehudin Ali, Salleh Amat, Mohd Izwan Mahmud, Mohd Hakimie Zainal Abidin, Mhd Subhan, Abu Yazid Abu Bakar\*

Universiti Kebangsaan Malaysia

\*Corresponding author E-mail: [yazid3338@ukm.edu.my](mailto:yazid3338@ukm.edu.my)

## Abstract

Medical programs have always been regarded as highly difficult and highly stressful professional programs when compared to other programs. Medical students need to be resilient because the programs are full of adversity that can bring stress and tension to themselves. The purpose of this study is to examine the level of resilience and sense of belonging among medical students. Respondents of this study consisted of 137-year three medical students. Two sets of questionnaires were used in this study; Brief Resilience Scale (BRS) and Sense of Belonging Instrument-Psychological (SOBI-P). The findings from this research show the level of resilience among medical students is considered as moderately high while sense of belonging level is high. The implications of this study on student's development and counselor's roles in higher learning institutions will also be discussed.

**Keywords:** Resilience, Sense of Belonging, Medical Students, Higher Learning Institution

## 1. Introduction

Being a medical student is tough because medical programs have always been regarded as highly stressful professional programs [1]. Besides this, medical education is even more stressful when compared to other professional programs [2]. Medical programs are full of adversities and difficulties that can cause stress and tension among students. Therefore, medical students need to be resilient in order to overcome and to cope with all of their difficulties. Resilience is one psychological factor that can help students to bounce back from adversity without having any adverse psychological effects. Basically, most previous studies about medical students were focusing more on stress factors but still lacked information on how students react and overcome all of their difficulties, especially in Malaysia. It is very important to know how students react to difficulties rather than to know about the factors that caused the problem itself because stress and difficulties are a part of our daily lives [3]. Therefore, the objective of this study is to examine the level of resilience among medical students. Other than that, this study also aims to discuss on the importance of sense of belonging to the physical and mental development of the students.

## 2. Literature review

Generally, resilience has been defined in many ways. Masten, Best and Garmezy [4] defines resilience as the process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances. However, resilience is the term that is often used to describe the ability to bounce back or recover from stress and to be able to adapt to stressful circumstances [5]. It requires action to do well against the odds, coping, and recovering

[6, 7]. In addition to this, resilience contributes to an easy temperament that promotes positive responses from others; self-esteem, self-efficacy, independence, self-reliance and environmental opportunities [8, 9]. A person whom successfully copes with the adversity they have and functions positively after that can be considered as a resilient person [10]. A resilient person has been regarded as a person with good social skills, able to live independently, succeeds in their education and career, happy with their established relationships and spared from depression problems. Previous studies have reported that a person who has good resilience levels will be able to cope with adversity in their life and also have good health compared to a person with low resilience levels [11]. This is because resilience can influence different aspects of human health such as emotional, mental and physical health. A study by Tugade and Fredrickson [12] found that psychological resilience also appears to be affected by the emotional state of the individual, and those who use positive emotions to deal with stress also appear to be more resilient than those who do not. Additionally, resilient people are always considered to be people with positive emotions and feelings [13] and have less probability to develop mental problems [14]. Besides this, one of the pillars of positive psychology is resilience [15]. In terms of gender, no conclusive results have been discovered even though Fergus and Zimmerman [16] have stated that the level of resilience between individuals is different in terms of gender. However, it was not mentioned whether males or females have higher resilience levels. Sense of belonging is an important mental health concept. As cited by Osterman [17], sense of belonging is a basic psychological need that is an essential part of human growth and development. Anant [18] defines sense of belonging as personal involvement in a social system to the extent the person feels himself to be an indispensable and integral part of the system. Additionally, sense of belonging can be defined as recognition and acceptance of a member by other members in a group [19]. Sense of belong-

ing is not only about an emotion felt in a social system but also at some place, as cited by Seamon [20]; a person will feel “at home” when they have a close relationship to the place. A previous study has reported on the importance of the sense of belonging to human growth and development such as human motivation and behavior [21]. Another study has reported the relationship between sense of belonging with depression, loneliness, anxiety and dissatisfaction [22, 23, 24]. Students who do not have a good sense of belonging will have psychological problems that affect their growth and development, especially when building relationships with others and communicating socially. In other words, we can say an individual will be passive and ineffective in their life if they lack a sense of belonging. Some studies have also reported that there are differences with regards to sense of belonging based on gender [25, 26, 27].

### 3. Research objectives

Generally, this study aims to examine the level of resilience and sense of belonging among medical students. This study also aims to examine the relationship between resilience and sense of belonging. Four research questions need to be answered:

- What is the level of resilience and sense of belonging among respondents?
- Are there any significant differences in regards to resilience levels based on gender?
- Are there any significant differences in regards to sense of belonging levels based on gender?
- Is there any significant relationship between resilience and sense of belonging?

Based on these research questions, three null hypothesis were created:

- Ho<sup>1</sup>: There are no significant differences in regards to resilience levels based on gender.
- Ho<sup>2</sup>: There are no significant differences in regards to sense of belonging levels based on gender.
- Ho<sup>3</sup>: There is no significant relationship between resilience and sense of belonging.

## 4. Methodology

### 4.1 Participants

This study was conducted in one of the public universities in Malaysia. The research method employed was by survey research design with questionnaires as the instrument to collect data. Samples were selected by using the convenience sampling technique. A total of 200 questionnaires were distributed to year three students that enrolled in the university’s medical program. However, only 137 respondents completed the questionnaires.

### 4.2 Instruments

Data was collected using two instruments; Brief Resilience Scale (BRS) and Sense of belonging Instrument-Psychological (SOBI-P). The BRS was developed by Smith et al.<sup>5</sup> which consists of six items; three positive items and three negative items. According to Smith et al.,<sup>5</sup> items 2, 4, and 6 are negatively worded and use reverse scoring. Respondents were asked to answer each question by indicating their agreement with each statement by using the following scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree. The total score ranges from 6 to 30 with the highest score showing high levels of resilience as reported by Smith et al.<sup>5</sup> Smith et al.<sup>5</sup> reported on the validity and reliability of the BRS and demonstrated good internal consistency with the value of Cronbach’s alpha ranging from .80-.91. In this study, the value of Cronbach’s Alpha is .84. Convergent validity

and discriminant predictive validity were also reported by Smith et al.<sup>5</sup> as part of the validation analysis. Sense of belonging was measured with the Sense of belonging Instrument – Psychological (SOBI-P) developed by Hagerty and Patusky [28]. The SOBI-P consists 18 items; all items were worded negatively and used reverse scoring except in item 4. Respondents were asked to answer each question by indicating their agreement with each statement by using the following scale: 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree to measure the psychological experience of valued involvement in a system or environment. The total score of the SOBI- ranges from 18-72 with the highest score showing a high level of sense of belonging, P, as reported by Hagerty and Patusky (1995). The validity and reliability of this instrument was reported by Hagerty and Patusky [28] and demonstrated good internal consistency with the value of Cronbach’s Alpha ranging from .91-.93. In this study, the value of Cronbach’s Alpha is .91. Content validity and construct validity were also reported by Hagerty and Patusky [28] as part of the validation analysis.

## 5. Results

A total of 137 (63%) year three undergraduate medical students perfectly completed the questionnaire from the 200 total students in the program. The subjects comprised of 64 (46.7%) males and 73 (53.3%) females. The limited diversity of the university as a whole is mirrored within the sample. Malays made up the predominant race in the sample with 88 (64.2%) students, Chinese followed second with 27 (19.7%) students and Indians followed third with 22 (16.1%) students. Besides this, Islam made up the predominant religion practiced in the sample which consisted of 88 (64%) students, followed by Buddhism in second with 20 (14.6%) students, Christianity followed third with 18 (13.2%) students and lastly, Hinduism, with 11 (8%) students. The age range varied from 22 to 23 years old with a mean age of 22.64 years old. The characteristics can be seen in Table 1.

**Table 1:** Respondent Characteristics

Characteristics	Frequency (%)
<b>Gender</b>	
Male	64 (46.7%)
Female	73 (53.3%)
<b>Ethnicity</b>	
Malay	88 (64.2%)
Chinese	27 (19.7%)
Indian	22 (16.1%)
<b>Religion Practiced</b>	
Islam	88 (64.2%)
Buddhism	20 (14.6%)
Hinduism	11 (8.0%)
Christianity	18 (13.2%)

### 5.1. What is the level of resilience and sense of belonging among respondents?

Analysis of descriptive was used to examine the level of resilience and sense of belonging among respondents. The findings show the mean score of resilience was 21.72 (sd = 4.39) while mean score of sense of belonging was 54.80 (sd = 7.88). The level of resilience can be considered moderately high while sense of belonging level as high. Table 2 shows the results of the analysis.

**Table 2:** Descriptive Analysis of Resilience and Sense of Belonging Score

	N	Mean	SD	Minimum	Maximum
Resilience	137	21.72	4.39	11	29
Sense of belonging	137	54.80	7.88	35	71

### 5.2. Are there any significant differences in regards to resilience levels based on gender?

An independent samples t-test was conducted to compare the resilience score for males and females. The result show there is significant difference in the resilience score for male ( $m = 20.73$ ,  $sd = 4.02$ ) and females ( $m = 22.60$ ,  $sd = 4.54$ ) ( $t = -2.529$ ,  $p < .05$ ). Therefore, the null hypothesis was rejected. Table 3 shows the result of independent samples t-test analysis.

**Table 3:** Analysis of Resilience Scores Based On Gender

Gender	N	Mean	SD	F	t	Sig.(p)
Male	64	20.73	4.02	.033	-2.529	.013
Female	73	22.60	4.54			

### 5.3. Are there any significant differences in regards to sense of belonging levels based on gender?

An independent sample t-test was conducted to compare the sense of belonging scores for males and females. The results show there is no significant difference in score for males ( $m = 53.60$ ,  $sd = 7.72$ ) and females ( $m = 55.84$ ,  $sd = 7.93$ ) ( $t = -1.669$ ,  $p > .05$ ). Therefore, the null hypothesis was accepted. Table 4 shows the results of the independent sample t-test.

**Table 4:** Analysis of Sense of Belonging Scores Based On Gender

Gender	N	Mean	SD	F	t	Sig.(p)
Male	64	53.60	7.72	.127	-1.669	.097
Female	73	55.84	7.93			

### 5.4. Is there any significant relationship(s) between resilience and sense of belonging?

The correlation between resilience and sense of belonging was investigated using Pearson product moment correlation coefficient. There was a positive correlation between resilience and sense of belonging ( $r = .197$ ,  $p < .05$ ). Therefore, the null hypothesis was rejected. Table 5 shows the result of analysis.

**Table 5:** Analysis of Relationship between Resilience and Sense of Belonging

Sense of belonging		
Resilience	Pearson Correlation	.097*
	Sig. (2-tailed)	.021
	N	137

## 6. Discussion, implication and suggestion

According to the results of the current study, medical students were found to have moderately high resilience levels. Based on a previous study, a person who has low resilience levels are not able to cope with adversity positively [11] when compared to a person who has high resilience levels. Persons whom have high resilience levels are more proactive when faced with challenges and are more likely to adapt to difficult circumstances by using both internal and external resources [29]. In addition to this, as mentioned by Carver, resilience refers to a state of returning to the previous level of functioning (e.g., bouncing back or recovery) and "thriving" as moving to a superior level of functioning following a stressful event. It can be said that a resilient person can function normally after having difficulties in their life. Resilience is an important factor and produces many benefits to human perseverance in difficult times. It can also build a positive attitude in oneself as resilience contributes to an easy temperament which promotes positive responses from others, self-esteem, self-efficacy, independence, self-reliance and environmental opportunities [8, 9]. Besides this, Block [30] posits that as a result of this adaptive flexibility, individuals with higher levels of resilience are more likely to experience positive effects, have higher levels of self-

confidence, and display better psychological adjustment than individuals with low levels of resilience.

Another finding of the study indicated that the level of sense of belonging among the students is high. Considering this situation, it was assumed that these students were able to build good relationships with their friends and faculty members, perceived themselves as academically competent and were highly motivated for their studies. Besides this, it was also assumed that these students showed less behavioral and mental problems among students. However, in order to sustain the students' sense of belonging, this matter should be given the attention of the university's management, especially by the student counselors. Possessing a high sense of belonging will decrease the student's tendency to experience problems such as depression, anxiety, loneliness and dissatisfaction as reported by previous studies as sense of belonging was found to have a strong relationship with mental health [31]. Furthermore, possessing a high sense of belonging will increase students' motivation to continue their studies and at the same time will improve their academic achievements [32] because sense of belonging is the key of educational success among college students [33]. Student counselors should manage sense of belonging oriented programs or conduct counseling sessions to provide support to students. It is not advised to allow students to feel that they do not belong with the people of their institution. This will give a huge impact to the students' growth and development.

Furthermore, the results indicated a significant difference in regards to resilience levels based on gender. This finding is similar with most of the previous studies; resilience levels differ based on gender [16] and males are more resilient than females [34, 35]. This study indicated that female are more resilience that their male counterpart. However, the small sample size may have affected the result of this study. It is recommended that in future studies researchers use large samples when examining the differences of resilience levels based on gender. Besides this, the world situation today is very challenging and is full of adversities and difficulties to each individual. Students need to meet the requirements of the program and also the expectations of their family. This situation will place additional burden to the students. Other than this, presently, student enrollment in universities show a higher number of female students being enrolled as compared to males, especially in Malaysia. This factor can also affect the results obtained from this study.

Another result shows that there are no differences in regards to sense of belonging levels based on gender. This result is consistent with other studies that present the relationship between sense of belonging and gender [27]. Even though there are no significant differences, however, the authors considered sense of belonging as an important psychological element to each individual, either male or female, because it will give a huge impact to individuals. Besides this, even though there are no differences in regards to sense of belonging and gender, it is hypothesized that the effects of sense of belonging differs between the two genders. How students react to matters concerning sense of belonging will make a difference. This research also revealed that there is a significant relationship between resilience and sense of belonging. This could mean resilience and sense of belonging may share similar characteristics, especially in psychological aspects such as emotions, feelings, and human development. It can be implied that a person that has good resilience levels also has a good sense of belonging, and vice versa.

## 7. Conclusion

Generally, there is a relationship between resilience and sense of belonging. Therefore, in opinion of the researcher, both of these variables are important to a student's life. The situation nowadays is very challenging, especially if a student faces new psychological elements that can affect their mental and psychological well-being. Stress and adversity is part of life and it is unavoidable. Most of the previous studies about student problems, such as de-

pression, anxiety and loneliness, focus more on the causal factor of the problem. It is important to study about the students' durability and perseverance when faced with a problem, such as with resilience. The best solution for these students is for them to enhance their resilience levels and to improve their coping skills as preparation to deal with stress and adversity. Furthermore, resilience will help these students to build their durability in dealing with adversity during their study. Besides this, research on sense of belonging is lacking in attention among researchers in Malaysia, even though previous studies have reported on the importance of sense of belonging to students. In addition, the interpretation of these findings should be made with caution due to the limitations of the study, especially the small sample size in this study. This research gives an early picture about the levels of resilience and sense of belonging among medical students in one of the public universities in Malaysia, medical students must be involved in counseling and guidance programs. Through this program, they can increase their resilience levels and deal with adversities more successfully. Therefore, counselors in higher educational institutions need to create many more guidance and counseling programs in order to enhance resilience levels and to foster sense of belonging among students. Previous studies have explained on the importance of both of these aspects to a student's development. Besides this, all institution staff need to work side by side with counselors to achieve this objective. The institution needs to consider the students' psychological well-being aspect and to refrain from only emphasizing on their academic achievements. Psychological aspects such as resilience and sense of belonging can affect student's academic achievement.

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