



## Depression, Anxiety, and Stress Scale (DASS-21) among Counselling Students: A Preliminary Study

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### ABSTRACT

This research aimed to determine the correlation between level of depression, anxiety and stress among counselling students at Universiti Malaysia Sarawak. This research adopted a correlational study with a quantitative approach in order to observe the correlation between the variables. Eighty six (86) respondents participated in this study. The study was conducted using Depression, Anxiety and Stress Scale (DASS-21) instrument. The result showed that there was a significant relationship between the level of depression, anxiety and stress among counselling students at Universiti Malaysia Sarawak. This research also provides awareness towards the counselling students on their level of depression, anxiety and stress. For future research, it is suggested that personality test and scoring test be conducted for level of depression, anxiety and stress in order to see the correlations between variables.

*Keywords:* DASS-21; depression; anxiety; stress; counselling student; Malaysia

### INTRODUCTION

Generally, students are not aware about self-care. They tend to ignore about their mental wellness which may lead to a number of psychological issues (Chatterjee, Saha, Mukhopadhyay, Misra, Chakraborty, & Bhattacharya, 2014). They are more concerned

about achieving and pursuing high grades without paying attention to their self-care. Self-care is about the ability of an individual to look after themselves and fulfil their needs in life (Asai & Kato, 2014; Mahmoud, Staten, Hall, & Lennie, 2014). Thus, it is important that self-care be given the priority above all in order to maintain the balance of life. It is the utmost necessity to observe relationship of depression, anxiety and stress among the vulnerable counselling students at Universiti Malay-

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sia Sarawak. Most of the counselling students at Universiti Malaysia Sarawak need to achieve good standard for academic and practicum fields. For academic, they need to be in the classroom and learn more by theoretical approach, while for practicum, they need to be outside the classroom and learn more by practical approach. Both academic and practicum fields are important in order to achieve the standard and accreditation by the Malaysia Board of Counsellors. Hence, this study is to determine whether the counselling student at the Universiti Malaysia Sarawak is mentally ready for both fields, as mentioned.

### PROBLEM STATEMENT

Nowadays, most of students have to face depression, anxiety and stress during their years of study in university (Chatterjee et al., 2014; Chernomas & Shapiro, 2013; Kittu & Patil, 2013). Depression, anxiety and stress could influence their academic performance. Apart from that, they also affect their healthy lifestyle. Most of the students with significantly high level of depression, anxiety and stress face many health problems. It is due to severe headache, extreme fatigue and feeling worthlessness in coping with their daily lifestyle (Busari, 2014). According to the National College Health Assessment (2015), university students reported that the issues of stress, anxiety and depression were negatively impacting on their academic performance. Uehara, Takeuchi, Kubota, Oshima, and Ishikawa (2010) stated that university students have to adapt to various psychosocial changes besides coping with academic and social demands at the university. Due to the high expectation for academic achievement, this environment can be stressful for students and if left untreated, many mental health issues occur, such as, depression and anxiety. Dyrbye,

Thomas, and Shanafelt (2006) stated that depression, anxiety and stress are the common mental health problems among university students. The National Health and Morbidity Survey III reported that young Malaysians aged between 16 to 24 years had the highest prevalence of acute and chronic suicidal ideation.

### OBJECTIVES

#### General Objective

To ascertain whether the level of depression, anxiety and stress among counselling students at Universiti Malaysia Sarawak correlates with each other.

#### Specific Objectives

- i. To identify the level of depression among counselling students which correlates with anxiety.
- ii. To identify the level of depression among counselling students which correlates with stress.
- iii. To identify the level of anxiety among counselling students which correlates with stress.

### HYPOTHESES

There were three hypotheses in this study as are shown below:

H<sub>0</sub>1: There is no significant relationship between level of depression and anxiety among counselling students at the Universiti Malaysia Sarawak.

H<sub>0</sub>2: There is no significant relationship between level of depression and stress among counselling students at the Universiti Malaysia Sarawak.

H<sub>0</sub>3: There is no significant relationship between level of anxiety and stress among counselling students at the Universiti Malaysia Sarawak.

### Depression among Students

American Psychological Association (APA) (2010) clarifies that depression often is seen as a person suffering from lack of motivation, persistent low mood, low energy and feeling of worthlessness for at least two following weeks. Chatterjee et al. (2014) revealed that more than half of nursing students participating in their research has slightly high level of depression. Moreover, it also shows that the first year student was the most affected among all. Mahmoud, Staten, Hall, and Lennie (2014) found that the student with higher level of dissatisfaction tends to have high level of depression. Apart from that, Iqbal, Gupta, and Venkatarao (2015) state that female medical students are more affected than male students. The same study also found that fear of not achieving their goal, as well as, stress and anxiety of facing several theoretical and practical subject result in depression. Daniel (2013) states that loneliness is one of the main factors causing the student to be depressed. Moreover, the same study found that level of attachments is highly correlated to the level of depression among students. Students with preoccupied and insecure attachment styles is said to be more depressed than the secure attachment styles. Chang, Law, and Chang (2011) found that personality traits are somehow associated with depression. Personality traits such as fear of being offended and self depreciation are some of the highly potential traits that are associated with depression. Therefore, depression is seen as the problem that needs high concern from others in order to promote better psychological well-being.

### Anxiety among Students

Chernomas and Shapiro (2013) found that anxiety among students were related

significantly to coping strategies. Less awareness on coping with the stress leads to anxiety among students in universities. Students in universities generally understand ways of coping, but are not able to implement them because they are less expose to the coping strategies. It shows that the students in the universities generally need guidance on how to cope with their emotions from experts. Meanwhile, Asai and Kato (2014) claim an individual with low sense of acceptance has high anxiety. Feeling of less support from others is caused by negative thought feelings of not accepted by others. Jensen and Nutt (2015) state that unlikeable emotional response to lack of companionship or loneliness can increase individual levels of anxiety. On the other hand, students who belong to a social group and living with someone significant towards them are said to be less anxious (Mahmoud et al., 2014). In addition, Alvi, Assad, Ramzan, and Khan (2010) also found that the level of anxiety will decrease as the students have constantly adapted with the environment. Furthermore, female students are found empirically to be more anxious than male students. Hence, anxiety is seen to be associated with negative thought feeling that has to be cured in order to have healthy brain and mind.

### Stress among Students

Kittu and Patil (2013) claim that medical students are usually facing higher stress compared to other students due to competition among them. Competitiveness usually happens in terms of achieving higher grade among the medical students. Kumaraswamy (2013) also found that medical students are facing stress more than the others because of fright of not achieving their aspiration of being a good student. Furthermore, the same study found that

sudden change from the high school environment towards college life and separation from the family are some of the stress factors towards students nowadays. Jensen and Nutt (2015) state that stress clearly alters the way an individual perceiving and coping with problem solving. Apart from that, students with high dissatisfaction are seen to be more stressful in facing their everyday life (Mahmoud et al., 2014). Moreover, the same study also found that female students are likely to be more stressful than male students. Chernomas and Shapiro (2013) claim that high level of stress among students is caused by ineffective coping strategies. Jensen and Nutt (2015) claim that stress can dangerously strain individuals abilities to cope. Coping strategies are very important for them to maintain and balance their psychological well-being.

## **METHODOLOGY**

### **Research Design**

The research was a correlational study. Correlational studies are used to observe the correlation between two variables (Ary, Jacobs, & Sorensen, 2010). This study also emphasizes on quantitative and questionnaire-based approach. Questionnaires are distributed to the respective participants to collect the data.

### **Population and Sample**

Population of the study was all counselling students at the Universiti Malaysia Sarawak. There is a total of one hundred and sixty five students in the first, second and third year of counselling program at the Universiti Malaysia Sarawak in Session 2014/2015. Thirty participants among fifty third year counselling students participated in the pilot study (Hill, 1998; Johanson

& Brooks, 2010). Approximately, eighty six participants among the remaining 115 participants were chosen as the sample of the study. A stratified random sampling is utilized to collect the data from the respondents. Stratified random sampling is done by grouping the respective population into their certain characteristics or strata and applied simple random sampling by picking up random sample from each and every stratum (Jawale, 2012). Hence, population of this study was stratified into two groups, first and second year counselling students. Then, the researchers applied simple random sampling by picking up forty three samples from each stratum.

### **Research Instrument**

The researchers adopted the Malay version of Depression, Anxiety and Stress Scale (DASS-21) as the research instrument (Ramli et al., 2010). They developed the questionnaire in two sections; Section A - Demographic Information (Gender, Ethnicity, Age and Education Background); Section B - DASS-21 (Depression, Anxiety and Stress Scale). DASS-21 consists of 21 items; every seven items emphasize on each scale of depression, anxiety and stress, respectively. Scoring process is determined according to the score level for each item stated by the respondent in the questionnaire.

### **Reliability Test**

Reliability test is used to measure the consistency and precision of the respective research instrument (Sidek, 2005). A total of thirty participants among fifty third year counselling students are chosen in this particular test. Hill (1998) and Johanson and Brooks (2010) assert that thirty participants are considered enough to conduct reliability test on survey research.

Hence, reliability values in between 0.50 and 0.90 are considered reliable by most of researchers around the world (Sidek, 2005). Table 1 below shows the result of reliability test conducted on the instrument. Therefore, the research instrument is considered reliable based on the value derived from the Cronbach's Alpha.

**FINDINGS AND DISCUSSION**

**Demographic Characteristics of Samples**

The demographic characteristics of the respondents in this study were gender, ethnicity, age and education background. The questionnaires were distributed to 86 first and second year counselling students

ers (29.1%) and Chinese (5.8%). Others (ethnicity) include Iban, Bidayuh, Punjabi, Siamese, Malay-Brunei, Rungus, Kadazan, Dusun and Sungai.

**Age**

As shown in Table 2, a majority of respondents were in the age category of 20 to 24 years old (94.2%), followed by 19 years and below (4.7%) and 25 to 29 years old (1.2%). Most likely the students with age 19 years and below were from Matriculation or Foundation Programme. Meanwhile, 20 to 24 years old were likely from the STPM, STAM, and Diploma.

**Table 1: Reliability Test**

Scale	Item	<i>Cronbach's Alpha</i>
Depression	7	0.90
Anxiety	7	0.70
Stress	7	0.80

at the Universiti Malaysia Sarawak. Table 2 shows the distribution of the respondents according to its demographic characteristics.

**Gender**

The total number of respondents in the sample was 86. From the survey, the majority of the sample were female (82.6%), while fifteen male (17.4%) participated in this study. Based on the population, the counselling courses have more female students compared to male students.

**Ethnicity**

Table 2 shows that Malays were the majority participants (65.1%), followed by oth-

**Educational Background**

According to the Table 2, the highest educational group was STPM (51.2%), followed by Matriculation or Foundation Programme (33.7%), Diploma (10.5%) and others (4.7%). Others education background was from STAM.

**Distribution of Study Sample according to DASS-21 Score in Different Year of Study**

Table 3 shows the distribution of study sample according to DASS-21 score among first year counselling students. Specifically, four respondents scored severe and extremely severe in level of de-

pression. Six respondents scored severe in anxiety as well as fourteen respondents scored extremely severe. Meanwhile, twelve respondents scored severe and 3 respondents scored extremely severe in stress, respectively. Obviously, there were 43 first year counselling students who had participated in this study. Logically, some students might score both high in anxiety and stress or vice versa.

Table 4 shows the distribution of study sample according to DASS-21 score among second year counselling students. Specifically, four respondents scored severe and two respondents scored extremely severe in level of depression. Four respondents scored severe in anxiety as well as seven respondents scored extremely severe. Meanwhile, one respondent scored severe and four respondents scored extremely severe in stress. Obviously, there

were 43 second year counselling students who had participated in this study. Logically, some students might score both high in anxiety and stress or vice versa. In a nutshell, first year students were seen to be more depressed, anxious and stressed compare to the second year counselling students.

### The Relationship between Level of Depression and Anxiety among Counselling Students

$H_0$ : There is no significant relationship between level of depression and anxiety among counselling students at Universiti Malaysia Sarawak.

The Pearson Correlation was used to determine the relationship between level of depression and anxiety among counselling

**Table 2: Distribution of Study Sample according to Demographic Characteristics**

Demographic Characteristics		Counselling Students at Universiti Malaysia Sarawak	
		Frequency	Percentage (%)
Gender	Male	15	17.4
	Female	71	82.6
	Total	86	100
Ethnicity	Malay	56	65.1
	Chinese	5	5.8
	Others	25	29.1
	Total	86	100
Age	19 years and below	4	4.7
	20 to 24 years old	81	94.2
	25 to 29 years old	1	1.2
	Total	86	100
Educational Background	STPM	44	51.2
	Matriculation/Foundation	29	33.7
	Diploma	9	10.5
	Others	4	4.7
	Total	86	100

students at Universiti Malaysia Sarawak. Table 5 shows the result of the analysis. It indicates that the relationship between level of depression and anxiety was found to be statistically significant, ( $r = .66, p = .000, p > 0.05$ ). The result shows that there was a strong positive relationship between level of depression and anxiety among counselling students at Universiti Malaysia Sarawak. Hence,  $H_{01}$  is rejected.

Level of depression is seen to be associated with level of anxiety among counselling students. This may be due to the process of adjusting towards the learning environment that they have to face in the college life is different from high school. Hence, they need to have support from others to guide them in their college life. The studies done by Jensen and Nutt (2015) and Daniel (2013) show that loneliness and lack of companionship may

lead to depression and anxiety among the individual themselves. Students have to be proactive in searching guidance from others as it might help them in achieving a balance well-being in their college life. Moreover, Iqbal et al. (2015) also found that depression is associated with anxiety and results in students facing the problem of achieving their goals in their study. Therefore, students have to be aware and moderately knowledgeable in preventing and minimizing their level of depression and anxiety.

### The Relationship between Level of Depression and Stress among Counselling Students

$H_{02}$ : There is no significant relationship between level of depression and stress among counselling students at Universiti

**Table 3: Distribution of Study Sample according to DASS-21 Score in First Year Counselling Students**

First Year Counselling Students (43 Participants)						
Scale	Score Level					DASS-21 Score $M \pm SD$
	Normal	Mild	Moderate	Severe	Extremely Severe	
Depression	21(48.8)	8(18.6)	6(14.0)	4(9.3)	4(9.3)	2.12 $\pm$ 1.37
Anxiety	8(18.6)	5(11.6)	10(23.3)	6(14.0)	14(32.4)	3.30 $\pm$ 1.50
Stress	21(48.8)	4(9.3)	3(7.0)	12(27.9)	3(7.0)	2.35 $\pm$ 1.49

**Table 4: Distribution of Study Sample according to DASS-21 Score in Second Year Counselling Students**

Second Year Counselling Students (43 Participants)						
Scale	Score Level					DASS-21 Score $M \pm SD$
	Normal	Mild	Moderate	Severe	Extremely Severe	
Depression	27(62.8)	5(11.6)	5(11.6)	4(9.3)	2(4.7)	1.81 $\pm$ 1.24
Anxiety	17(39.5)	6(14.0)	9(20.9)	4(9.3)	7(16.3)	2.49 $\pm$ 1.50
Stress	26(60.5)	7(16.3)	3(11.6)	1(2.3)	4(9.3)	1.84 $\pm$ 1.29

Malaysia Sarawak.

The Pearson Correlation was used to analyze the relationship between level of depression and stress among counselling students at Universiti Malaysia Sarawak. Table 6 shows the result of the analysis. It indicates that the relationship between level of depression and stress was found to be statistically significant, ( $r = 0.60, p = 0.000, p > 0.05$ ). The result shows that there was a moderate positive relationship between level of depression and stress among counselling students at Universiti Malaysia Sarawak. Hence,  $H_02$  is rejected.

Based on the result, level of depression is highly associated with stress. This may be due to the students way of

cally understand their needs and satisfaction in study, so that they are able to live in peace and harmony.

**The Relationship between Level of Anxiety and Stress among Counselling Students**

$H_03$ : There is no significant relationship between level of anxiety and stress among counselling students at Universiti Malaysia Sarawak.

The Pearson Correlation was used to analyze the relationship between level of anxiety and stress among counselling students at Universiti Malaysia Sarawak. Table 7 shows the result of the analysis.

**Table 5: The Relationship between Level of Depression and Anxiety**

Variable	Pearson Correlation ( $r$ )	Significant (2-tailed), ( $p$ )
Level of Depression – Anxiety	.66**	.000

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

pursuing study skills in their college life are so different from each other. Kittu and Patil (2013) identify competitiveness as the main causes of stress among students. Students have found that competitive skills might increase their chances towards achieving better goal without taking care of their own self-care, such as, minimizing the stress and depression in their life. Chernomas and Shapiro (2013) simultaneously found that depression and stress are highly associated with dissatisfaction in someone’s life. High dissatisfaction proportionally results in high depression and stress. Students have to be wise and criti-

It indicates that the relationship between level of anxiety and stress was found to be statistically significant, ( $r = .75, p = .000, p > .05$ ). The result shows that there was a strong positive relationship between level of anxiety and stress among counselling students at Universiti Malaysia Sarawak. Hence,  $H_03$  is rejected.

Based on the result, level of anxiety highly correlates with stress among counselling students. This may be due to the fear of not achieving their respective goals in the study, as well as, fear of facing the subject or course that needs an extra commitment by performing theoretically

**Table 6: The Relationship between Level of Depression and Stress**

Variable	Pearson Correlation ( $r$ )	Significant (2-tailed), ( $p$ )
Level of Depression - Stress	.60**	.000

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



and practically, simultaneously. Kumaraswamy (2013) states that sudden change in the way of perceiving study skills, such as, theoretical and practical is one of the main factors of stress. Meanwhile, Chernomas and Shapiro (2013) agree that anxiety and stress highly correlate with lack of coping strategies among students. Other factors that might result in increasing anxiety and stress are the students who have to face the homesick situation whereby they have to live separately from the significant person in their life. Daniel (2013) and Jensen and Nutt (2015) strongly agree that loneliness and lack of companionship may result in inclination of anxiety and stress. Moreover, Mahmoud et al. (2014) surprisingly found that an individual who live with someone significant will result in less anxious life. It clearly shows that how far the most significant person is in an individual life may affect their level on anxiety and stress.

**Implications of Depression, Anxiety, and Stress among Students**

Depression causes students to have poor performance in the classroom compared to students who did not (Arslan, Ayranci, Unsal, & Arslantas, 2009). Students may experience decrease in performance in performing job related to their study and it might also influence their ability to perceive understanding towards particular courses taught in the classroom. Arslan et al. (2009) show that students with depression have poor healthy lifestyle compared to students who did not. It is because high depression level may lead to poor awareness on dealing with their own self-care.

Vitasari, Muhammad, Ahmad,

and Muhammad (2010) find that students with anxiety generally could not perform very well in their study. This is because the anxiety causes them to have lack of preparation during examination. In fact, lack of readiness during class presentations can also causes anxiety. Moreover, lack of readiness during class presentation might also influence the social skills during their conversation. Hence, anxiety may cause numerous problems that lead to poor performance in the class.

Busari (2014) shows that stress has impact on the students well-being either physically or emotionally. Both impacts can extremely cause poor performance in achieving better grade in their study. Physically, they frequently suffer headache, fatigue and muscle tightness. Emotionally, they frequently suffer from increasing level of frustration and feeling of hopelessness in coping with daily routine. Hence, the impact specifically could influence performance in class as well as their health. Thus, most of students might face difficulties in maintaining healthy and balanced lifestyle.

**IMPLICATIONS OF THE STUDY**

This study might help students to have a better understanding about how high their level of depression, anxiety and stress are. Moreover, students also can learn to cope with their mental wellness as they are provided with better awareness towards their level of mental well-being. This study also assists students to get an idea on how to deal with time management, which can maximize their performance effectively.

This is because better performance can be

**Table 7: The Relationship between Level of Anxiety and Stress**

Variable	Pearson Correlation ( <i>r</i> )	Significant (2-tailed), ( <i>p</i> )
Level of Anxiety - Stress	.75**	.000

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

achieved from a better and systematic time management. Apart from that, it also helps them create an idea of creative and innovative solutions in order to achieve healthy and balanced lifestyles.

### **Implications for the Professional Helping Services**

The result of this study may benefit the professional helping services in terms of analyzing the problem among university students. It also gives an idea to them in conducting proper intervention process to assist their clients in overcoming anxiety, depression, and stress. Besides, the professional helping services also can come up with better treatment or clinical solutions towards solving these vulnerable issues.

### **LIMITATIONS OF THE STUDY**

The researchers find out several limitations in this study. Firstly, the research instrument used was a questionnaire and the results depend on students' perception. This questionnaire was administered to collect data for analysing correlation between level of depression, anxiety and stress. Thus, the data collected were considered as self-reported data as they rely on the respondents' willingness to answer. The honesty of the respondents may affect the outcomes of this study. Besides, there could be a misconception in the way the researcher interprets the data comparing to what message that respondents actually want to convey.

Secondly, this study was conducted in one particular public university which is at Kota Samarahan, Sarawak. The other public or private university was not involved in this study. Therefore, the result focuses on one place and not diverse enough to provide full frame of universities in Malaysia.

### **RECOMMENDATIONS FOR FUTURE RESEARCHERS**

Future researchers could use mixed method, such as, the blend of quantitative approach and qualitative approach in collecting the data from the respondents for the research. This is because from the interview session, the researcher can get rich and precise information and data rather than only using questionnaire where the answers might not represent the actual meaning of the respondents. Besides, future researchers can conduct both personality test and scoring test for level of depression, anxiety and stress to get a picture of how personality might influence the level of depression, anxiety and stress.

### **CONCLUSION**

In a nutshell, the researchers made reasonable conclusion based on the results and findings of the research. Based on the findings, the level of depression, anxiety and stress are statistically proven. Descriptively, first year students are most affected among counselling students at the Universiti Malaysia Sarawak. Inferentially, all null hypotheses were rejected. Overall, there is a significant relationship between level of depression and anxiety; level of depression and stress, level of anxiety and stress among counselling students at the Universiti Malaysia Sarawak.

### **REFERENCES**

- Alvi, T., Assad, F., Ramzan, M., & Khan, F. A. (2010). Depression, anxiety and their associated factors among medical students. *Journal of the College of Physicians and Surgeons Pakistan*, 20(2), 122-126.
- Ary, D., Jacobs, L. C., & Sorensen, C. (2010). *Introduction to research*

- in education*. (8<sup>th</sup> ed.). Australia: Wadsworth CENCAGE Learning.
- Arslan, G., Ayranci, U., Unsal, A., & Arslantas, D. (2009). Prevalence of depression, its correlates among students, and its effect on health-related quality of life in a Turkish university. *Uppsala Journal of Medical Sciences*, *114*, 170-177.
- Asai, M., & Kato, D. (2014). Anxiety, depression, and a sense of acceptance in female Japanese university students. *Social Behavior and Personality*, *42*(7), 1167-1174.
- Busari, A. O. (2014). Academic stress among undergraduate students: Measuring the effects of stress inoculation techniques. *Mediterranean Journal of Social Sciences*, *5*(27), 599-609.
- Chang, S. M., Law, D. W., & Chang, H. K. (2011). The impact of personality on depression among university students in Taiwan. *Chang Gung Medical Journal*, *34*(5), 528-534.
- Chatterjee, S., Saha, I., Mukhopadhyay, S., Misra, R., Chakraborty, A., & Bhattacharya, A. (2014). Depression among nursing students in an Indian government college. *British Journal of Nursing*, *23*(6), 316-320.
- Chernomas, W. M., & Shapiro, C. (2013). Stress, depression, and anxiety among undergraduate nursing students. *International Journal of Nursing education Scholarship*, *10*(1), 255-266.
- Daniel, K. (2013). Loneliness and depression among university students in Kenya. *Global Journal of Human Social Science, Arts and Humanities*, *13*(4), 11-18.
- Dyrbye L. N., Thomas, M. R., & Shanafelt, T. D. (2006). Systematic review of depression, anxiety, and other indicators of psychological distress among U.S and Canadian medical students. *Academic Medicine*, *81*(4), 354-373.
- Feist, G., & Rosenberg, E. (2010). *Psychology: Making connections* (1st ed.). New York, USA: McGraw-Hill.
- Hill, R. (1998). What sample size is "enough" in internet survey research? *Interpersonal Computing and Technology: An Electronic Journal for the 21st Century*, *6*, 1-10.
- Iqbal, S., Gupta, S., & Venkatarao, E. (2015). Stress, anxiety and depression among medical undergraduate students and their socio-demographic correlates. *Indian Journal of Medical Research*, *141*, 354-357.
- Jawale, K. V. (2012). Methods of sampling design in the legal research: Advantages and disadvantages. *Online International Interdisciplinary Research Journal*, *2*(6), 183-190.
- Jensen, F. E., & Nutt, A. E. (2015). *The teenage brain: A neuroscientist's survival guide to raising adolescents and young adults*. London, UK: HarperThorsons.
- Johanson, G. A., & Brooks, G. P. (2010). Initial scale development: Sample size for pilot studies. *Educational and Psychological Measurement*, *70*, 394-400.
- Kittu, D., & Patil, R. (2013). Study of association of psychological stress and depression among undergraduate medical students in Pondicherry. *National Journal of Community Medicine*, *4*(4), 555-558.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, *30*, 607-610.

- Kumaraswamy, N. (2013). Academic stress, anxiety and depression among college students: A brief review. *International Review of Social Sciences and Humanities*, 5(1), 135-143.
- Mahmoud, J. S. R., Staten, R. T., Hall, L. A., & Lennie, T. A. (2014). The relationship among young adult college students' depression, anxiety, stress, demographics, life satisfaction and coping styles. *Issues in Mental Health Nursing*, 33, 149-156.
- National College Health Assessment (2015). *University of Texas Austin: Executive Summary*. (Spring 2015). American College Health Association: Texas.
- Ramli, Mohd. A. F., & Zaini Z. (2010). *Translation, validation, & psychometric properties of Bahasa Malaysia version of the Depression Anxiety Stress Scale*. Retrieved from <http://versys.uitm.edu.my/prisma/view/viewPdf.php?pid=711>
- Sidek Mohd Noah. (2005). *Pengujian & penilaian dalam kaunseling: Teori & aplikasi*. Serdang, Selangor: Penerbit Universiti Putra Malaysia.
- Sidek, M. N. (2005). *Pengajian & penilaian dalam kaunseling. Teori & aplikasi*, Serdang, Selangor: Penerbit Universiti Putra Malaysia.
- Uehera, T., Takeuchi, K., Kubota, F., Oshima, K., & Ishikawa, O. (2010). Annual transition of major depressive episode in university students using a structured self-rating questionnaire. *Asia-Pacific Psychiatry*, 99-104.
- Vitasari, P., Muhammad, N. A.W., Ahmad, O., & Muhammad, G. A. (2010). A research for identifying study anxiety sources among university students. *International Education Studies*, 3(2), 189-196.