

Emotional Intelligence of Malaysian University Students Using Non-Parametric Approach

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ABSTRACT

The purposes of present study are to investigate the level of emotional intelligence among university students, identify the significant differences of emotional intelligence with demographic background and measure the relationship of emotional intelligence with academic performance. Non-parametric methods which are Mann-Whitney test, Kruskal-Wallis test and Spearman Correlation test were used to analyze 400 data from eight different faculties. Results found that the level of emotional intelligence among university students is at average or above level. The different of age, ethnic, faculty, hometown location and family income have significant difference in emotional intelligence. Besides that, there are strong positive relationship between emotional intelligence and academic performance among university students.

Keywords: Emotional Intelligence, Academic Performance, Non-Parametric Methods.

1. INTRODUCTION

Emotional intelligence known as emotional quotient (EQ) is very abstractive that affect human's thinking and action. It is an essential predictor of individual life outcomes that grows from early adolescence to young adulthood [5]. Emotional intelligence is defined as the ability of individual to recognize his or her own behaviors, moods, impulses and managing them well according to the situation. It involves emotional empathy, attention and discrimination of people emotion, recognition of themselves and other's mood accurately, manage mood or control over emotion, response with appropriate emotions and behaviors in life situations [8].

High emotional intelligence will help in avoiding procrastination, self-doubt, low achievement and help balancing between works, home and recreational life. For example, high emotional intelligence enables individual to have good self-motivation and goal management. Besides that, EQ is the pattern of how people's tendency to direct their thinking to make decision in a better way as well as their simplicity in differentiating biases to present clear and perfect judgment [8]. There are four boarder factors that can measure the emotional intelligence which are well-being, self-control, emotionality and sociability.

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2. LITERATURE REVIEW

Emotional intelligence accounts 90% of organizational leaders to be succeeded [15]. Since emotional intelligence is cultivated from young, there are several demographic variables that important in predicting the level of emotional intelligence such as family income and parent's education level. Past research conducted showed that father who has high education level are more likely to have higher emotional intelligence scores as compared to those father of less educated families [6]. In other words, individual emotional intelligence tends to be in higher category if he or she was born in educated family.

Another study done by [4] found that the emotional intelligence level of females tend to be higher than males. It may be due to the diverse responsibilities as a mother to handle many children, a housewife to manage the tasks at home, a working woman to perfectly finish the job on time. This study was supported by [9] which also found that there is a significant relationship between gender and level of emotional intelligence. Instead of gender, family income level is also one of the factors that influence the individual emotional intelligence.

Researches on brain processes reveal that there is a strong connection between learning process and emotion. Scientists have discovered that the area of brain that are involved in processing emotion are also involved in processing memory [14]. As we know, memorizing is one of the learning processes and it could be distracted by emotion. Individual who is under stress and fear situation may probably difficult to remember or memorize the past memories or events.

A study conducted by [11] indicated that with increase in emotional intelligence, the students were academically motivated. [1][10] had the same opinion where high emotional intelligence can improve students understanding in studying and able to get a good academic achievement. In contrast, students who are low in emotional intelligence may have higher probability to be failure because they undermine their academic motivation [3].

Some students may have difficulty in learning because their minds are clouded with distracting thoughts and memories [2]. Sometimes they confront with the invisible pressure and live under a tension condition. This causes the students feeling stress and maybe extends to the problem of mental health as they cannot manage their emotions well. Recent year, the problem of self-harm and suicide had occurred in local university as they cannot manage their emotions well just because they did not get their desired results. Therefore, this study aims to measure the relationship between emotional intelligent and demographic and academic background among undergraduate university students in University Tun Hussein Onn Malaysia (UTHM) located in Batu Pahat, Johor.

3. METHODOLOGY

Questionnaire has been chosen as an instrument for data collection which contains questions on demographic background, academic achievement and four elements of emotional intelligence. Trait Emotional Intelligence Questionnaire-Short Form (TEIQue-SF) developed by [7] was used to identify the level of emotional intelligence which contains 30 questions with Likert scale measurements from 1 to 7. It provides scores for four factors: Wellbeing, self-control, emotionality, and sociability. Well-being is comprised of questions 5, 20, 9, 24, 12, and 27. Self-control is comprised of questions 4, 19, 7, 22, 15, and 30. Emotionality is comprised of questions 1, 16, 2, 17, 8, 23, 13, and 28. Sociability is comprised of 6, 21, 10, 25, 11, and 26. For questions 2, 4, 5, 7, 8, 10, 12, 13, 14, 16, 18, 22, 25, 26, and 28 are reverse-coded. Questions 3, 14, 18, and 29 contribute only to the global trait EI score. According to [13], global trait emotional

intelligence is the average score of all 30 items, the four subscale scores can be derived from 26 of these items: Well-Being (6 items), Self-Control (6 items), Emotionality (8 items), and Sociability (6 items). A score of emotional intelligence is calculated by summing up the item scores and dividing by the total number of items [12]. The scores of emotional intelligence is converted into percentage. According to [7], the scores of TEIQue-SF are reported in three different banding categories which is showed in Table 1.

Table 1 Categories Score of emotional intelligence [7]

Categories	Score (%)
High	$70 \leq X \leq 100$
Average	$30 \leq X < 70$
Low	$1 \leq X < 30$

There were 400 samples collected using stratified random sampling procedure that involves eight faculties. Hypothesis testing is the use of statistics to determine the probability that a given hypothesis is true. It is a statistical test that is used to determine whether there is enough evidence in a sample of data to prove that a certain condition is true for the entire population. In this study, the hypothesis testing is used to analyze the significant difference between emotional intelligence and demographic background. Non-parametric test which are Mann-Whitney U-test and Kruskal-Wallis test were used to assess the significant difference between emotional intelligence in demographic background and academic performance. An advantage of Mann-Whitney U-test is that the two samples under consideration may not necessarily have the same number of observations. The Kruskal-Wallis test is a nonparametric test to compare outcomes among more than two independent groups. Although this test is for identical populations, it is designed to be sensitive to unequal means. Meanwhile, a Spearman's Correlation coefficient test was used to identify the relationship of emotional intelligence factors on academic performance. The Spearman's correlation coefficient r_s is the non-parametric version of the Pearson product-moment correlation where it measures the strength of association between two ranked variables. The positive value of correlation indicates that both variables increase or decrease together whereas negative value of correlation indicates that as one variable increases, so the other decreases and vice versa.

4. RESULT AND DISCUSSION

Most of the respondents were male which consists of 206 respondents and the others were female which is 194 respondents. Meanwhile, majority of the respondents were from age of 22 to 25 years old which is 268 respondents. There are 118 respondents were from age 18 to 21 years old and only 14 respondents were from age 25 years old and above. The Malay and Chinese occupied a large number of respondents which are 194 and 181 respondents respectively. While the Indian and others ethnic only held 20 respondents and 5 respondents respectively.

There are 400 respondents had been taken as a sample in this study and each faculty held the same number of respondents which is 50 respondents. Therefore, there are 12.50% of respondents from each faculty which are Faculty of Civil and Environmental Engineering (FKAAS), Faculty of Electrical and Electronic Engineering (FKEE), Faculty of Mechanical and Manufacturing Engineering (FKMP), Faculty of Technology Management and Business (FPTP),

Faculty of Technical and Vocational Education (FPTV), Faculty of Computer Sciences and Information Technology (FSKTM), Faculty of Sciences, Technology and Human Development (FSTPI) and Faculty of Engineering Technology (FTK).

Most of the respondents were from urban area which occupied 221 respondents while the other 179 respondents are from rural area. Besides that, more than half of the respondents from the family that income equal or lower than RM 3000 (230 respondents), 120 respondents were from the middle class family which family income is between RM 3001 and RM 6000 and only 50 respondents were from the high income family which family income is more than RM 6000.

In addition, most of the respondents' father's education level were from group secondary school or below which occupied a number of 272 respondents. On the other hand, there are only 63 and 65 respondents father's education level were from group diploma and degree or above respectively. Meanwhile, more than half of the respondents' mother's education level were from group secondary school or below which are 302 respondents, 52 respondent's mothers had diploma while only 46 respondent's mothers had their education level at degree or above. Table 2 shows about respondents' background in percentage value.

Table 2 Background of respondents

Respondent Background		Percentage (%)
Gender	Male	51.50
	Female	48.50
Age	18 - 21	29.50
	22 - 25	67.00
	Above 25	3.50
Ethnic	Malay	48.50
	Chinese	45.25
	Indian	5.00
	Others	1.25
Hometown	Urban	55.25
	Rural	44.75
Family Income	Below RM 3000	57.50
	RM 3001 - RM 6000	30.00
	Above RM6001	12.50
Fathers Education Level	Secondary school or below	68.00
	Diploma	15.75
	Degree and above	16.25
Mothers Education Level	Secondary school or below	75.50
	Diploma	13.00
	Degree and above	11.5

4.1 Level of Emotional Intelligence of UTHM Undergraduate Students

Frequency table in Table 3 showed that all of the respondents' emotional intelligence level is at the average and high level. More than half of the respondents (63.5%) having moderate or average level of emotional intelligence. We can conclude that majority of university students have good emotional intelligence since their academic background during primary and secondary schools were excellent and the emotional intelligence level were tend to be in average level or higher for the educated people.

Table 3 Frequency table of level of emotional intelligence of respondents

		Frequency	Percent
Average		254	63.5
Valid	High	146	36.5
	Total	400	100.0

4.2 Significant Difference between Emotional Intelligence and Demographic Background

From Table 4, the Mann-Whitney test statistics showed that the p-value is 0.207 which is greater than 0.05. Thus, the H_0 was failed to reject where there is no significant difference between emotional intelligence among different gender as different gender will not influence individual thinking and the way of doing something. However, the p-value of hometown location factor is 0.018 which is smaller than 0.05, thus H_0 was rejected. We can conclude that there is a significant difference in emotional intelligence between people living in urban area and people from rural area.

Table 4 Mann-Whitney test of emotional intelligence and demographic background

Hypothesis testing	Z-score	p-value	Result
Gender	-1.262	0.207	H_0 was failed to reject
Hometown Location	-2.355	0.018	H_0 was rejected

Table 5 showed that the p-value of the Kruskal-Wallis test for the age group, ethnic group, faculty and family income are smaller than 0.05, thus H_0 was failed to reject. Different age groups have different level of emotional intelligence where older people who experienced a lot of obstacles and success in life are able to control feeling when facing difficult situation compare to young people. Instead of age, different ethnic group also are different in level of emotional intelligence. This may due to the way and style of education are different between Malay, Chinese and Indian people which affect the level of thinking and emotional control.

Table 5 Kruskal-Wallis test results of emotional intelligence and demographic background

Hypothesis testing	Chi-square value	p-value	Result
Age group	12.214	0.002	H_0 was failed to reject
Ethnic group	30.072	0.000	H_0 was failed to reject
Faculty	30.275	0.000	H_0 was failed to reject
Family Income	21.270	0.000	H_0 was failed to reject
Father Education Level	4.381	0.112	H_0 was failed to reject
Mother Education Level	0.837	0.658	H_0 was failed to reject

In UTHM, there are eight different faculties where majority of undergraduate students are from engineering background and minority of them are from education, management, sciences and information technology (IT) fields. Students with different academic programs have different

knowledge, timetables, courses, activities and academic performance. Therefore, the emotional intelligence level is varying among them. Besides that, this study proof that the emotional intelligence is also different between rich family and poor family.

In contrast, the p-value for the emotional intelligence level in different father and mother education level are greater than 0.05. Thus, H_0 was failed to reject. This means that there is no significant difference in emotional intelligence between different levels of education of father and mother. This is because parents will educate their children in the best possible way even if they have different levels of education.

4.3 Relationship between Emotional Intelligence and Academic Performance

From Table 6, the value of Spearman correlation coefficient to measure the relationship between emotional intelligence and Cumulative Grade Point Average (CGPA) is 0.557. We can conclude that the relationship is positive and strong where the higher the level of emotional intelligence of the student, the higher the score they will gain in examinations. Intelligent students are always having positive thinking that influences the decision making process and able to control the emotion effectively. Emotions not only have the potential to energize students' thinking but also have the potential to interfere the learning process.

Table 6 Correlation of emotional intelligence and academic performance

	Emotional Intelligence	
	Spearman's rho Correlation	Sig. (2- tailed)
Emotional Intelligence	1	
CGPA	.557**	.000

This study involves four factors of emotional intelligence which are well-being, self-control, emotionality and sociability that refer to the life satisfaction of human, stress managing and emotional regulation, aware of own feelings or others and comfortable feel in different context respectively.

From the correlation value in Table 7, we can see that self-control factor has the highest relationship with the academic performance (measure in terms of CGPA) of university students ($r = 0.538$). The relationship is strong and positive compare to others factors that have weak positive relationship. Self-control influences much on academic performance because the students who able to control themselves are always good in time management, solving problem and learning process. However, the combination of four factors of emotional intelligence is more important which may affect their frame of mind and attitude in doing something directly or indirectly. Furthermore, these factors will not only influence in decision making process and the academic performance, but the entire life.

Table 7 Correlation of emotional intelligence factors and academic performance

	CGPA	
	Spearman's rho correlation	Sig. (2- tailed)
CGPA	1	
Well-being	0.168	.001
Self-control	0.538	.000
Emotionality	0.293	.000
Sociability	0.194	.000

5. CONCLUSION

In conclusion, the level of emotional intelligence among university students in UTHM is in average and high level. Furthermore, the results from this study found that there is a strong relationship between emotional intelligence and academic performance. Students with high emotional control are motivated to score high marks in examination as well as in curricular activities. They are able to manage themselves in problem solving and have a good social relationship with friends.

From this study, we found that there is no significant difference of emotional intelligence between males and females as well as parent's education level. Educated parents are not always can handle the emotion effectively as their life is always pressured by job demand. High level of stress may decrease the level of emotional intelligence. In contrast, this study reveals that there is a significant difference of emotional intelligence in different age, ethnic, faculties, hometown location and family income.

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