

Research Article

Status of Emotional Intelligence (EI) Level of Biomedical Science Programme in Kuala Lumpur

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Abstract: Emotional Intelligence (EI) is part of those who regulate their emotions according to a logically consistent of emotional functioning. This cross-sectional study is carried out among year 1 to 3 students of Biomedical Science Programme in Kuala Lumpur. The questionnaire is based on three criteria which are intrapersonal ability, stress management and general mood. The sample size is 135 students by using stratified random sampling. The general objective of this study is to determine the emotional intelligence level of Biomedical Science students among socio demographic factor. The results showed the mean of EI male students (111.84 ± 12.92 S.D.) is lower than that in female students (112.02 ± 10.23 S.D.), the mean of EI among student staying in campus (112.55 ± 10.947 S.D.) are higher than campus student staying off-campus (110.76 ± 10.274 S.D.) and the mean of EI among first year (114.35 ± 13.32 S.D.) is the highest compared to that in Year 2 (113.16 ± 9.592 S.D.) and Year 3 (109.93 ± 10.169 S.D.). However there was no significance mean difference of EI between gender, year of study and residences ($p > 0.05$). In conclusion, Emotional Intelligence (EI) is at average level (79.7%) and it was not depending on gender year of study and residences.

Keywords: Biomedical students, emotional intelligence, general mood, intrapersonal ability, stress management

INTRODUCTION

Emotional intelligence is considered a type of intelligence concerning the ability to control emotions (Furnham, 2009). Besides that, emotional intelligence is a gift when a person can manage their stress, anger, anxiety and change it to motivate oneself and others through understanding emotions (Wharam, 2008). Abraham Maslow even wrote regarding how people could enhance their emotional, physical, spiritual and mental strengths in the 1950s and modeled this in his Hierarchy of Needs which on an earthly plane, culminated in 'self-actualisation' (Wharam, 2008).

In addition, emotional intelligence is also an ability to be social intelligence that involves in the skill to be in charge of their emotions, to separate between emotion and rational thinking and use the information to guide their actions (Salovey and Mayer, 1990). Emotional intelligence was discovered and brought into scientific attention by Salovey and Mayer (1990). There is a few researchers also have carried out dynamic tests on the construct and incremental reliability of emotional intelligence (Furnham, 2009). People high in emotional intelligence are good at controlling and managing their own emotions and other's emotions.

This is important so that the actions that has been taken are from wise decision (Wharam, 2008).

In this study, several aspects which are related to the emotional intelligence are chosen such as intrapersonal ability. The intrapersonal skills include positive self-regard, self-efficacy and autonomy and have been linked to successful performance (Bar-On, 2000; Gardner, 2004). This is suitable to correlate with the students as it can measure students' emotional intelligence level with the ability of the students to think and know their own strengths and weaknesses (Malekar and Mohanty, 2008). General mood is also one of the aspects that nevertheless always affected by EI. It is defined as "the ability to express positive emotions and remain optimistic" (Bar-On, 1997). Another study found that persons with high scores of emotional intelligence were more likely than low scorers to maintain an experimentally induced positive mood in their study (Robitaille, 2008). Since mood reflects how the students express their good emotions and stay to be optimistic, the high general mood shows their satisfactions of lives and remain a positive prospective (Malekar and Mohanty, 2008; George, 2008). Furthermore, Day and Livingstone (2005) defined stress capability to be tolerate in any situations either happy or difficult (Malekar and Mohanty, 2008).

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Stress has been found to have wide-ranging impact on the physical, physiological, cognitive and behavioral well-being of an individual and his or her functioning in variety environment (Ogunyemi, 2008). With a good management of stress, they are able to stay calm and can cooperate well under the pressure they facing most of the time. Not only that, they will not feel stress when handling a nerve-racking event and without any emotional out-burst (Malekar and Mohanty, 2008).

MATERIALS AND METHODS

A cross-sectional study was conducted among first year to third year Biomedical Sciences students in Kuala Lumpur. A name list of the students of Biomedical Sciences first year until third year was taken and all the respondents were selected by using stratified random sampling method. However, the students who have emotional problems and the members of our group were excluded. There was a total number 178 of students from first year until third year in Biomedical Science programme. Before the questionnaires were distributed, pilot study was carried out and 10 people who were excluded in the study population are needed. Cronbach's Alpha show that it was 0.827, which showed that the questionnaires were highly reliable. Besides, the validity of the questionnaire was conducted through content validity.

Questionnaire was used in this study. The questionnaire was divided into three parts. Scoring method was used for the questionnaire. The questionnaire was prepared in English. First part was the intrapersonal ability scale. Example of questions included were 'I am aware of both of my weaknesses and strengths' and 'I can accept my weaknesses without

feeling ashamed'. Second part was the general mood scale. Some examples of the questions were 'I know how to make my positive emotion to last longer' and 'I motivate myself by imagining a good outcome on every task I take on'. Third part was stress management scale. The questions used in this part included 'I am not easily frustrated and irritable when there are excessive workloads' and 'When feeling stressed I try to take a break or do something enjoyable'.

RESULTS

A total number of 133 questionnaires were collected back. Among 133 respondents, there were 19.6% (26) Year One students, 36.8% (49) Year Two students and 43.6% (58) Year Three students. (18.8%) (25) of them were male while 81.2% (108) are female. Among the respondents, 69.9% (93) of them were Malay, 22.6% (30) were Chinese, 5.3% (7) were Indian and 2.3% (3) of them were from other races. The residential areas of respondents had been categorized in university residence or other than off-campus residence. From the research, 68.4% (91) respondents were staying in university residences whereas the other 31.6% (42) respondents were staying off-campus.

Figure 1 shows the scores achieved by year 1 to 3 Biomedical Science students in each aspects of EI based on the questionnaires. Those aspects are Intrapersonal Ability, General Mood and Stress Management. The General Mood aspect of Emotional Intelligence (EI) has the highest mean which is 38.23 among the three aspects then followed by Intrapersonal Ability (36.92) and Stress Management (36.83).

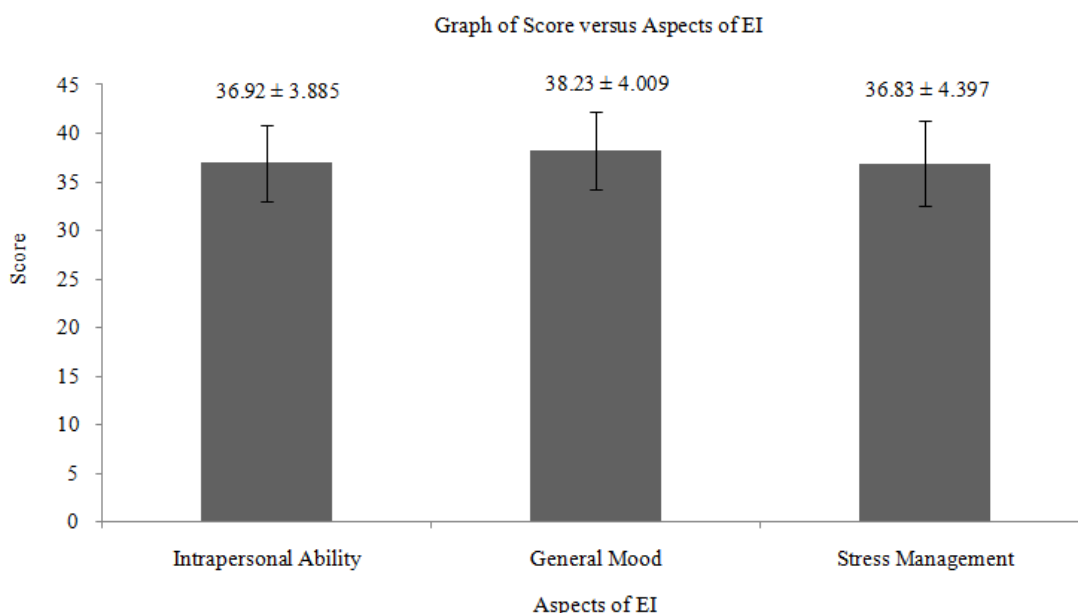


Fig. 1: Graph of score versus aspects of EI

Table 1: Socio-demographic characteristics of the respondents

Characteristics		Number	(%)
Year of study	Year one	26	19.6
	Year two	49	36.8
	Year three	58	43.6
Gender	Male	25	18.8
	Female	108	81.2
Race	Malay	93	69.9
	Chinese	30	22.6
	Indian	7	5.3
	Others	3	2.3
Residential area	Campus	91	68.4
	Off-campus	42	31.6

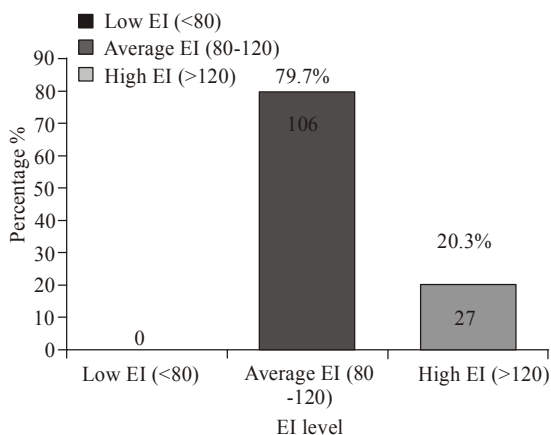


Fig. 2: Frequency and percentage of EI level of students (n = 133)

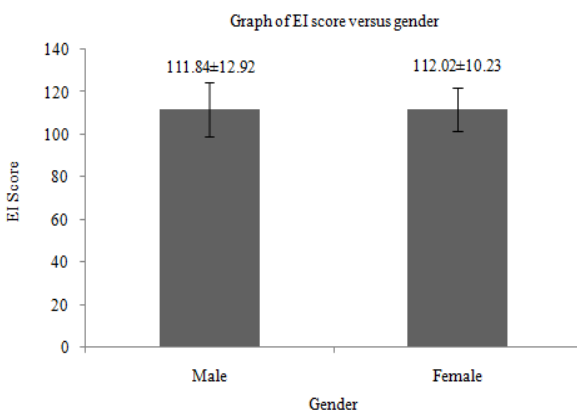


Fig. 3: Comparison of emotional intelligence level between genders

Table 1 shows the aspects characteristics of the respondents. For the category of intrapersonal ability, the highest mean score is among year one student, female students and students who stay in university residence. Year one students have a mean score of 37.27 (S.D. 5.016), female students with mean score of 36.93 (S.D. 3.520) while students who stay in campus have mean score of 36.95 (S.D. 4.064). In the aspect of general mood, year one students mean score are 39.65 (S.D. 4.749), female students with mean score of 38.31 (S.D. 3.861) whereas students staying in campus have mean score of 38.58 (S.D. 4.185). These three groups of

Graph of EI score versus year of study

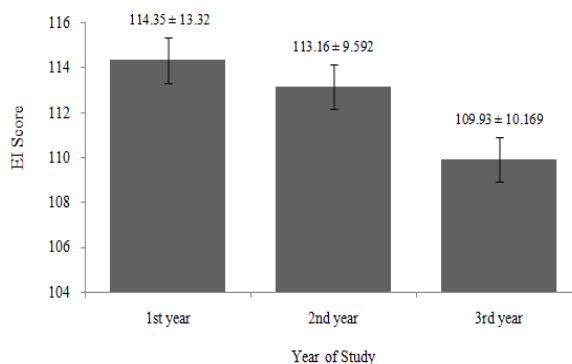


Fig. 4: Comparison of emotional intelligence level between year of study

students have the highest mean score for general mood aspect. Three groups of students with the highest mean score for the aspect of stress management are year two students, male students and students who stay in campus. The mean score for year two students are 37.71 (S.D. 3.937). Male students have mean score of 37.04 (S.D. 4.402) while students staying in campus with mean score of 37.02 (4.269).

Figure 2 shows the EI level among year 1 to year 3 Biomedical Science students. The level of EI was divided into three categories which are low level, average level and high level. For the EI among year one to year three Biomedical Science students, 0% (0) of the students have low EI. Most of the students have average EI which was indicated by 79.7% (106) while 20.3% (27) of the students have high EI.

Figure 3 shows comparison of Emotional Intelligence (EI) level between the male and female students from Year 1 to 3 of Biomedical Science programme. From the independent t test, it is found that there was no significant difference of mean EI among the male and female students as the significant value exceeds 0.05, where the male students with n = 25 (M = 111.84, S.D. = 12.919) and female students with n = 108 (M = 112.02, S.D. = 10.230) and 95% CI (-4.908, 4.551).

Table 2 shows comparison of Emotional Intelligence (EI) among year 1 to 3 Biomedical Science students based on the residential area. Independent t test was used to compare the scores between residential areas. For the level of EI, in comparing the mean between residential area, the significant value of t-test was 0.374 (p>0.05). Thus, there was no significant difference of EI among students who stayed in campus and students who stayed other than campus, where students who stayed in campus with n = 91 (M = 112.55, S.D. = 10.947) and students who stayed other than campus with n = 42 (M = 110.76, S.D. = 10.274).

Figure 4 shows comparison of Emotional Intelligence (EI) level among Biomedical Science

Table 2: Aspects characteristics of the respondents

Characteristics	Intrapersonal ability mean (S.D.)	General mood mean (S.D.)	Stress management mean (S.D.)
Year of study	1	37.27 (5.016)	39.65 (4.749)
	2	37.24 (3.545)	38.20 (3.298)
	3	36.48 (3.604)	37.62 (4.107)
Gender	Male	36.88 (5.270)	37.92 (4.672)
	Female	36.93 (3.520)	38.31 (3.861)
Residential area	In campus	36.95 (4.064)	38.58 (4.185)
	Others	36.86 (3.510)	37.48 (3.529)

student according to the year of study. Independent t test was used to compare the scores between year of study. For the level of EI, in comparing the mean year of study, the significant value of t test was 0.137 ($p > 0.05$). We can conclude that there was no significant difference of mean EI among year of study, where year 1 student with $n = 26$ ($M = 114.35$, $S.D. = 13.32$), year 2 students with $n = 49$ ($M = 113.16$, $S.D. = 9.592$) and year 3 students with $n = 58$ ($M = 109.93$, $S.D. = 10.169$).

DISCUSSION

From the research, most students were having average EI level. This means that they are good in their intrapersonal ability. Intrapersonal ability is the ability of the students to think and know their own strengths and weaknesses. They also capable to organize their future plan efficiently to pursue their own dreams. Apart from that, they are confident with their own ability. Those who have average or high EI level is actually can be considered as the people who have high empathy and can understand other feelings and situation as well as emotions better. They can sense something wrong on others based on just facial expressions and voice tone. People that have average and EI level can actually guide and help others solving problems or leading a group. Since they can control themselves, they also have the ability to control situations and in higher level, control others mind (George, 2008). For these students, they can be the place for their friends shared the problems without even getting affected negatively. Such skill or abilities are also included as intrapersonal abilities.

Emotional Intelligence (EI) was a series of emotional skills when dealing with any situations. There are many domains of EI such as general mood, interpersonal ability and stress management (Bar-On, 2000). One of the domains is general mood. Bar-On (1997) has stated that general mood is associated with self-motivation and the ability to enjoy their lives and people around them. People who have good skills in general mood of EI are always cheerful, hopeful, positive, well motivated and know how to enjoy life. Optimism is one of the characteristics in general mood. Optimism was defined as the ability and capability to remain positive thinking at all time even in challenges moments.

From the various definitions of stress, we can conclude that the definition of stress comprises the demands or perceived stressors on a person; individual characteristics and the outcomes of behavior (Ramesar *et al.*, 2009). From that previous study, it shows that stress management has relationship between EI. There are many companies and organization that uses stress managements programs and focusing on the symptom of stress at workplace. EI is important to deal with stress situation not just in workplace but also during daily life (Ramesar *et al.*, 2009).

Emotional Intelligence (EI) level was graded into low, average and high (Fiedeldey, 2010). Low EI level was indicated by the scoring less than 80, average EI level was indicated by scoring from 80 to 120 whereas high EI level was indicated by scoring of 120 and above. Since there was no Biomedical Science student from year 1 to 3 has low EI level, only two grades were used. From the research, most students were having average EI level where their scores are within 80 to 120. They are good in their intrapersonal ability. Intrapersonal ability is the ability of the students to think and know their own strengths and weaknesses. They also capable to organize their future plan efficiently to pursue their own dreams. Apart from that, they are confident with their own ability. Since the ages of most of the subjects are from 19 to 23 years old, they are experienced enough to manage their stress as they were facing a lot of problems before. They might be learnt something from the problem in order to manage their stress. The good stress management will increase their EI level. Furthermore, as a university student, they are good enough to maintain their positive attitude and of course they are satisfied with their life. As a result, this will lead to self respect and self satisfied.

It is found that there was no significant difference of mean Emotional Intelligence (EI) between gender. Even though the number of male subjects in this study was much lesser than the females, which was 25 compared to 108 of female subjects, the effect size calculated however gave a negative value and this indicated that there was virtually no difference between the total score of emotional intelligence between male and female students. The finding of this study is parallel to the study that had been done by Ogunyemi (2008) to investigate the effects of provocation and emotional mastery programmes on fostering EI of Nigerian adolescents. It is aimed to establish whether gender will

moderate the effects of the two techniques on EI skills of adolescents. This finding turned out to be gender does not have any significant effect on the participants' level of EI.

Besides that, the finding of this study is also parallel with another study which was conducted by Olatoye *et al.* (2010) to investigate the extent to which the level of creativity and emotional intelligence influenced the level of academic achievement of Higher National Diploma business administration students of Polytechnics in the South Western States of Nigeria. The sample size of this research was consisted of 235 subjects with ages that range from 18 to 33 years old; the mean age is 23 with standard deviation of 6.2. All the subjects are studying in their final year and the number of female students is 122 whereas male students are 113. As there is no significant relationship between creativity and academic achievement hence the researcher has concluded that there is no significant difference between male and female students' academic achievement, creativity and emotional intelligence. Students from both genders have equal opportunity to participate not only in formal learning, but also in organizing activities and this exposes the students to various kind of stress that indirectly enabled them to acquire the skills to handle their emotions efficiently.

From this study, there was no significant difference of mean EI between residential areas. This result suggested that the residential area no matter the students staying in campus or off-campus, their EI level will not be affected. This finding indicated that residential area may not be an efficient tool to investigate the EI level. However, the mean score of students staying at campus was higher than those staying other than campus. Thus, this showed that the EI level of students staying at campus was higher.

This result is contrast with previous research done by Madhavi and Vijayalaxmi (2010). From the research, we assumed that the subjects that stay at home are the subjects that stay other than campus because most of the students who stay other than campus normally rented a house and some of them stayed at their own house. While, students who stay at hostel were considered staying at campus because the environment of campus is totally a hostel's environment. From Madhavi and Vijayalaxmi (2010), they found that students who stay at home have high EI level and this may due to the fact that home provides ample of opportunity to share joys and sorrows. However, from our research, the mean score of EI level for student stay at campus (hostel) is higher than those stay other than campus (home) and there was no significant of EI among residential area.

The contrast may due to the fact that all biomedical science students are having the same staying environment. First of all, our multi residential area is

peaceful and there is complete facility in all the residential area such as internet, café and shuttle to faculty. Therefore, there is no discrimination between students stay in campus or outside campus. Environment for both campus and other than campus are generally same. In addition, the student's status is mostly same among them. They got scholarship and PTPTN so there is no financial problem.

From our study, there is no significant difference of mean EI between years of study. This shows that the academic level does not affect the EI level of a person. This finding of our study is parallel to the studies conducted by Bradshaw (2008). According to study among 60 undergraduate female in Afrika American college shown that there is no statistically significant difference between Afrika American female college students' emotional intelligence level and their academic level. Academic level in this study was defined as the undergraduate enrollment status or year of study for matriculating students such as Freshmen year, Sophomore year, Junior year and Senior year. Besides, this finding may due to the fact that all Biomedical Science students regardless the year of studies are having the same workloads and study acquirement. Furthermore, the gap of age involving the students is not big which only one is or two years apart, therefore the differences in experience and knowledge are not big.

CONCLUSION

Based on the result, we can conclude that most student from year 1 to 3 of Biomedical Science have average emotional intelligence level. We found from 133 participants, 0% (0) of the students have low EI. Most of the students have average EI which was indicated by 79.7% (106) while 20.3% (27) of the students have high EI. This means that students are optimistic, able to work under pressure and know their own strength and weakness.

Besides, there is some high EI level among first year students and students who stay in campus. This may due to compulsory to stay in campus and involve in certain activities conducted in campus. Thus, first year students have a better way to control emotions and stress compared to seniors and those staying outside whom seldom join activities. In addition, there is no significant different of emotional intelligence level in term of gender, residential area and year of study among year one to year three Biomedical Science students.

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