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EQ Scores of University Students belonging to the Dept. of Medical Social Work

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Introduction

It is very important to try and understand students' views of their internal situation in order to offer them a more suitable curriculum.

EQ (emotional intelligence) is one of attempting to understand these students' views. It serves as the basis for this report. The concept of EQ has become popular since Goleman[1] published Emotional Intelligence in 1995, though researchers' own definitions vary[2–4]. In general, emotional intelligence is thought to involve the ability to perceive emotions, to access and generate emotions that assist thought, to understand emotions and emotional knowledge, and to regulate emotions reflectively for promoting emotional and intellectual growth[2]. A person with these abilities is considered to be well-adjusted and emotionally skilled; deficiencies in these abilities render a person socially and emotionally disabled [2].

To measure emotional intelligence a self-report scale is highly useful [2,5]. The emotional intelligence scale can provide a good measure of the likelihood that a person uses emotions as a guide to decision making[2,5]. Many studies on the measurements for emotional intelligence have been conducted [2]. In 1996 Uchiyama was the first to develop the Emotional Intelligence Scale in Japanese[6], and some revised editions later[7,8]. Since such abilities can be the key to success in society, the concept of emotional intelligence is applied to develop business skills using an emotional intelligence scale[9,10]. The ability to control emotions, one of the factors of emotional intelligence, can be improved by training[11,12]. This suggests that EQ also can be applied to educate university students and assist them in their career planning.

The object of this study is to understand the students who belong to the Department of Medical Social Work in K University, and ultimately to develop an educational curriculum more suitable for them. As a first step, the questionnaire survey using the Japanese emotional intelligence scale (digest version) [13] was carried out on the students. The result were then discussed and compared with other research on Japanese university students.

Method

1. Subjects

The subjects were 790 university students (male 249 female 541) belonging to the Department of Medical Social Work in K University. The number of students in each grade and sex are shown in Table 1.

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Table 1 The number of samples

school year	male	female	total
first	86	121	207
second	60	155	215
third	54	125	179
fourth	49	140	189
total	249	541	790

2. Materials

The Emotional Intelligence Inventory in Japanese, the 40-item scale by Sakairi et al. (<http://www2.tokai.or.jp/HARMONY/>), was used. The items were constructed using a Likkert-format scale of five alternative responses with anchors of 1: never like me, 2: occasionally like me, 3: sometimes like me, 4: frequently like me, and 5: always like me. The score was the sum of ratings. The statistical analysis was made by using SPSS.

3. Procedure

With informed consent (The contents of informed consent agreements were written on the head of the face sheet and also read aloud: the object of this study is only to get the mass data to know the character of the students belonging to the faculty. The unsigned data is calculated statistically and each individual's data will only be used to write a paper. There is no obligation to answer all of the questions.), the 40-item subject inventory was given to each student during lectures. A one hundred percent student response was available for analysis.

Results

1. EQ scores of students

The mean, S. D., Minimum, and Maximum EQ score of all students are shown in Table 2. The total mean EQ score was 132.81. Intrapersonal consistency was 77.42 and Interpersonal consistency was 55.39. The mean score of each 10 factors is shown in Figure 1. The mean score of 'self-control' was the lowest and that of 'altruism' was the highest. The mean score of 'empathy' was also high.

Table 2 The mean EQ score of students

	Mean	S. D.	Min.	Max.
Total EQ	132.81	15.94	60.00	187.00
Intrapersonal	77.42	10.51	29.00	112.00
Factors				
tactfulness	13.14	2.49	4.00	20.00
self-awareness	13.70	2.15	6.00	20.00
self-decision	12.61	2.55	4.00	20.00
self-motivation	13.35	2.54	4.00	20.00
optimism	12.92	2.45	4.00	20.00
self-control	11.68	2.43	4.00	19.00
Interpersonal	55.39	7.38	25.00	78.00
Factors				
altruism	14.97	2.47	5.00	20.00
empathy	14.47	2.27	5.00	20.00
social skill	13.43	2.40	4.00	20.00
social deftness	12.52	2.38	4.00	20.00

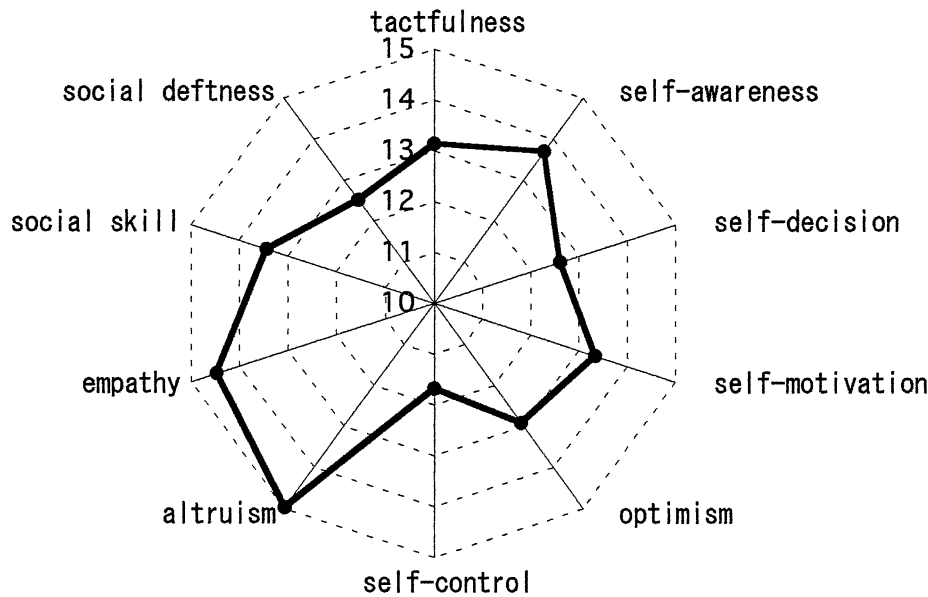


Fig. 1 The mean EQ score of factors

2. Sex differences of EQ scores

The mean, S. D., Minimum, and Maximum EQ scores for each sex are shown in Table 3. Some sex differences were found. The total mean EQ score for male students (134.79) was significantly higher than that of female students (131.9) ($t=2.26$, $df=788$, $p<0.05$). Though there was no sex difference between 'Intrapersonal consistency' and 'Interpersonal consistency', it was found that there were sex differences in some factors. The results from t-tests by SPSS show the mean score of 'tactfulness' for male students (13.57) was significantly higher than that of female (12.95) ($t=3.16$, $df=788$, $p<0.05$), and the mean score of 'self-motivation' of males (13.71) was higher than that of females (13.19) ($t=2.59$, $df=788$, $p<0.05$). The mean score of 'empathy' for females (14.62) was significantly higher than that of males (14.14) ($t=-2.61$, $df=788$, $p<0.05$).

3. Differences among each grade of EQ scores

The mean, S. D., Minimum, and Maximum EQ score for each grade is shown in Table 4. Results from the one-way analysis of variance show there were significant differences among grades in 'Intrapersonal consistency' ($F(3,686)=3.37$, $p<0.05$). The mean score of 'Intrapersonal consistency' in the Fourth grade was clearly higher than that found in the First grade. There were no differences among each grade in the mean of total score and 'Interpersonal consistency.' The mean, S. D., Minimum, and Maximum EQ score for each factor in each grade was shown in Table 5. There were significant differences among grades,

in 'tactfulness', 'self-decision', and 'optimism', as shown by the results from the one-way analysis of variance ('tactfulness' $F(3,686)=3.27$, 'self-decision' $F(3,686)=2.86$, 'optimism' $F(3,686)=2.96$, $p<0.05$). Results from multiple comparisons using the LSD method demonstrate the details of the significant differences. The mean score of 'tactfulness' for Fourth grade (13.46) was significantly higher than that of First grade (12.94) and of Second grade (12.84). The mean score of 'self-awareness' for Third grade (14.01) was significantly higher than that of First grade (13.55). The mean score of 'self-decision' for Fourth grade (13.08) was significantly higher than that of any other grade.

Table 3 The mean EQ score of students

		Mean	S. D.	Min.	Max.
Male n=249	Total EQ	134.79 ^{a)}	17.32	61	187
	Intrapersonal	79.5	11.25	30	112
	Factors				
	tactfulness	13.57 ^{b)}	2.68	4	20
	self-awareness	13.73	2.39	6	20
	self-decision	13.06	2.62	4	20
	self-motivation	13.71 ^{c)}	2.75	4	20
	optimism	13.22	2.47	5	20
	self-control	12.2	2.63	4	19
	Interpersonal	55.29	8.14	31	78
	Factors				
	altruism	14.81	2.62	6	20
	empathy	14.14 ^{d)}	2.47	5	20
	social skill	13.68	2.7	4	20
social deftness	12.66	2.67	4	20	
Female n=541	Total EQ	131.9 ^{a)}	15.22	60	177
	Intrapersonal	76.46	10.02	29	107
	Factors				
	tactfulness	12.95 ^{b)}	2.37	4	20
	self-awareness	13.68	2.03	6	20
	self-decision	12.41	2.5	4	20
	self-motivation	13.19 ^{c)}	2.42	4	20
	optimism	12.79	2.44	4	19
	self-control	11.45	2.31	4	18
	Interpersonal	55.44	7.01	25	75
	Factors				
	altruism	15.04	2.41	5	20
	empathy	14.62 ^{d)}	2.17	5	20
	social skill	13.32	2.25	5	20
social deftness	12.46	2.23	5	19	

There were significant sex differences ($p < 0.05$)

a) $t=2.26$ b) $t=3.16$ c) $t=2.59$ d) $t=-2.61$, $df=788$ in each.

Discussion

The Total mean EQ score for this research was 132.81. Intrapersonal consistency was 77.42 and Interpersonal consistency was 55.39. Yamaguchi[3] reported that the Total mean EQ score of 337 university students in his study was 132.54, that of Intrapersonal consistency 78.85, and Interpersonal consistency 53.69. The EQ scores of samples of this research were very similar to Yamaguchi's data, and these scores might help to identify one 'standard' of young university students in Japan.

The mean score of Intrapersonal consistency (77.42) was higher than that of Interpersonal consistency (55.39). Intrapersonal consistency was defined as 'the ability to be aware of self-emotion and to control it', and Interpersonal consistency was defined as 'the ability to be aware of others' emotions and to get along with them in society'. It was found that the students were better at being aware of their own emotion than others' emotions. In each case, this trend was shown more clearly in the factors.

As for the factors in this research the highest mean score was for 'altruism' and the lowest was for 'self-control'. Uchiyama[6] defined 'altruism' as 'the ability to respect and have concern for others', 'self-control' as 'the ability to control one's own emotion well'. It was suggested that the students could pay good attention toward others, though they were not good at controlling their own emotional impulses. Uzuki and Shimai[14] used EQ scores to the kind of occupation which the students hoped to get and showed that

Table 4 The mean EQ score of students in each grade

year		Intrapersonal ¹⁾	Interpersonal	Total
First n=207	Mean	76.42	55.20	131.62
	S. D.	10.66	7.62	16.49
	Min.	30.00	25.00	60.00
	Max.	108.00	78.00	181.00
Second n=215	Mean	76.35	54.82	131.18
	S. D.	9.92	6.42	14.64
	Min.	43.00	32.00	82.00
	Max.	110.00	77.00	187.00
Third n=179	Mean	77.95	56.16	134.11
	S. D.	10.80	8.16	17.11
	Min.	29.00	27.00	62.00
	Max.	100.00	74.00	169.00
Fourth n=189	Mean	79.21	55.53	134.75
	S. D.	10.55	7.35	15.45
	Min.	44.00	25.00	72.00
	Max.	112.00	74.00	182.00

1) There was a significant difference among grades
 $F(3, 786) = 3.37$ ($p < 0.05$).

the mean score of 'altruism' was highest in the students who tried to get jobs relating to social welfare. Most of the students in this survey were also interested in jobs relating to the field of social work. The high score for 'altruism' of these students suggests this relationship. Occupations helping other people require the ability to respect others based on a good understanding of humans. In this context, the students are suited for occupations related to social welfare. On the other hand, the low score for 'self-control' showed the difficulty students have in getting along with others in this society. This survey didn't show why this score was the lowest and whether it might be the feature of the students of this faculty, or that of young persons in general in Japan, This should be researched in the future.

The Total mean EQ score for male students was significantly higher than that of female students. The mean score of 'tactfulness' for male students (13.57) was significantly higher than that of females, and the mean score of 'empathy' for females was significantly higher than that of males. The sex differences on EQ have already been suggested by Goleman. Goleman said that 'Females can understand their own emotions and be empathetic, and males can be optimistic and easy to adapt to change'. Yamaguchi's research showed that the sex differences on EQ scores of university students had the same trend as Goleman's suggestion. Such sex differences also appeared in this research, and reinforced Yamaguchi's results.

Through the four grades, the mean score of 'altruism' was the highest and 'self-control' was the lowest in this research. The grade did not relate to the tendency of the mean EQ score. Uzuki and Shimai[14] said that EQ scores increased a little according to age. This research also showed the relationship between age and EQ scores in the younger generation.

Students who understand their level of EQ can choose the occupation which is suitable to their character[9]. This student data will contribute to setting up an educational program for career planning.

Conclusion

Results from the analysis of EQ scores of students belonging to the Department of Medical Social Work demonstrated that the total EQ was almost the same as that of other university students. They knew their own emotions well, but were unable to recognize others' emotions. This made it difficult for them to get along well with others. The mean score of Intrapersonal consistency was higher than that of Interpersonal

Table 5 The mean EQ score of factors in each grade

		Intrapersonal (S=self)					
		tactful-ness ¹⁾	s-awar-ness	s-deci-sion ²⁾	s-morti-variation	opti-mism ³⁾	s-cont-rol
First (n=207)	Mean	12.94	13.55	12.44	13.29	12.71	11.50
	S. D.	2.40	2.15	2.51	2.31	2.37	2.46
	Min.	4.00	6.00	4.00	4.00	5.00	4.00
	Max.	19.00	20.00	20.00	19.00	20.00	19.00
Second (n=215)	Mean	12.84	13.64	12.45	13.10	12.71	11.60
	S. D.	2.30	2.12	2.37	2.45	2.41	2.26
	Min.	5.00	7.00	6.00	6.00	4.00	5.00
	Max.	20.00	20.00	20.00	18.00	20.00	19.00
Third (n=179)	Mean	13.42	14.01*	12.51	13.46	12.98	11.51
	S. D.	2.75	2.04	2.76	2.79	2.51	2.68
	Min.	4.00	7.00	4.00	4.00	4.00	4.00
	Max.	20.00	19.00	19.00	20.00	19.00	18.00
Fourth (n=189)	Mean	13.46*	13.63	13.08*	13.62	13.34*	12.08
	S. D.	2.49	2.27	2.56	2.62	2.50	2.33
	Min.	4.00	6.00	5.00	4.00	8.00	4.00
	Max.	19.00	19.00	20.00	20.00	20.00	18.00
		Interpersonal					
		altruism	empathy	social skill	social deftness		
First (n=207)	Mean	14.97	14.31	13.39	12.53		
	S. D.	2.41	2.29	2.33	2.45		
	Min.	6.00	7.00	6.00	4.00		
	Max.	20.00	20.00	20.00	19.00		
Second (n=215)	Mean	14.87	14.40	13.21	12.34		
	S. D.	2.18	1.94	2.32	2.32		
	Min.	7.00	9.00	5.00	5.00		
	Max.	20.00	20.00	20.00	20.00		
Third (n=179)	Mean	15.13	14.72	13.60	12.71		
	S. D.	2.75	2.43	2.70	2.42		
	Min.	5.00	6.00	4.00	6.00		
	Max.	20.00	20.00	20.00	18.00		
Fourth (n=189)	Mean	14.93	14.49	13.57	12.54		
	S. D.	2.60	2.45	2.28	2.33		
	Min.	6.00	5.00	6.00	6.00		
	Max.	20.00	20.00	20.00	19.00		

1)-4) There were significant differences among grades ($p < 0.05$)

1) $f(3, 786) = 3.27$ 2) $f(3, 786) = 2.86$ 3) $f(3, 786) = 2.96$.

* shows that the number was significant compared with another/other grade results from the multiple comparison LSD method

consistency. This was especially shown clearly in the score of factors. They scored high on 'altruism' and 'empathy', but were not good at 'self-control'. This data suggests that it is very important for students to develop the ability to control their own emotions if they want to work in the field of social welfare. Specific individual EQ scores would seem to be useful for developing the future education programs.

This research does not make clear whether the scores should be as the standard for all young people in Japan or as a specific score for the students who learn social welfare in K university. To demonstrate this point, more data should be collected.

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