

A study of the emotional intelligence and life adjustment of senior high school students

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ABSTRACT: In the process of educating adolescents, good emotional development and the life adjustment are two significant factors for teachers to know. This study is based on a random cluster sampling of senior high school students in Taiwan and Anhui province in mainland China. Significant differences were found between those students in Taiwan and Anhui province in China concerning emotional intelligence (EI) and life adjustment (LA). Also, with different background variables, senior high school students in Taiwan did not show significant differences in EI, but their parenting style revealed significant differences for LA. Furthermore, with different background variables, only the factor of parents' marital status was not significantly different in the EI of senior high school students in Anhui. Birth order showed no significant difference in those students' EI. A positive and modest correlation was found between the EI and LA scores for students in both Taiwan and Anhui. Finally, from the findings of this study, the researchers provide some recommendations for educators to refer to. It can be concluded that such a survey should be made available to all students in order to enhance their performance in the fields of EI and LA.

INTRODUCTION

School education puts more emphasis on the learning of knowledge rather than on students' frame of mind. Yet students feel nervous, anxious, frustrated, depressed and abased when instructors ignore their emotions. If students cannot receive timely guidance from school authorities, teachers or their parents, or timely concern from their peers or siblings, then their unstable emotions may result in behavioural disorders. Furthermore, mental disorders can influence students' academic achievements and life adaptation.

Entry into the secondary school is a *trajectory changing event that represents a convergence of physical, mental, social, familial and social developments* [1]. Clearly, there is reason to be concerned about the well-being of early adolescents. Educators often underestimate the importance of developing students' abilities to adapt and get along with people; however, students' learning abilities depend on their experience of their ability to adapt and cope with people [2].

In short, being confident and positive when seeking to solve problems is the core factor for good emotional development and life adaptation. Educators often underestimate the importance of these demands, but, in reality, children's energy for learning depends on the nature of these coping experiences. When adolescents enter the middle school level, the problems they confront may challenge their coping skills and are often the main reason for their experiencing pressure. Thus, it is important that middle school education brings with it opportunities and demands to learn to adapt and cope [2].

PURPOSES

Based on the aforesaid rationale and research background, the main purpose of this study was to understand the following objectives:

- Compare the differences in emotional intelligence between senior high school students in Taiwan and the Anhui province in mainland China;
- Compare the differences in life adjustment between senior high school students in Taiwan and Anhui province;
- Compare the differences in students' emotional intelligence and life adjustment given different background variables;
- Identify any correlation between emotional intelligence and life adjustment among senior high school students;
- Provide recommendations, according to the research conclusions, to improve emotional management and life adaptation for all students.

METHOD

The study targeted senior high school students in Taiwan and Anhui province in 2005. The samples were selected by random cluster sampling. Based on two inventories, the effective sample numbered 1,060.

FRAMEWORK

The framework of this study is shown in Figure 1. This indicates a relationship between the background variables and dependent variables.

INSTRUMENT

The progress of this study incorporated a literature review [3][4]. It also included the development of a scale of these inventories and an analysis of the data obtained. After these items were developed, seven experts were asked to evaluate these items in order to ensure their validity. These inventories utilised a 5-point scale: very good, good, average, poor and very poor. The scores were assigned a value of 5, 4, 3, 2 and 1, respectively.

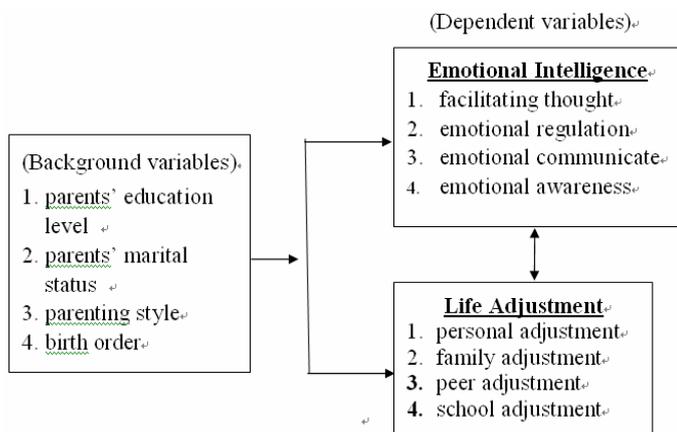


Figure 1: Framework of the research.

The data was analysed by using means, standard deviation and factor analysis in these inventories. An orthogonal rotation axis was conducted using the Varimax method [5]. Those items whose commonalities had eigen values greater than one were retained. A scatter diagram was compiled and the Pearson correlation coefficient was subsequently estimated to indicate the type and the strength of the association between structural design and inventories. This correlation is statistically significant at the 5% level of significance. This indicated that the reliability coefficient of this scale is very reliable. The reliability of the scale of these inventories was presented as the Cronbach α , which was deemed to be sufficiently reliable for the purpose of this study.

The tools of this study contained two inventories: students' emotional intelligence inventory (EII) and life adjustment inventory (LAI). The α coefficient in the former was between 0.88 and 0.93 on each scale, and 0.90 on the total scale of emotional intelligence. The α coefficient in the latter was between 0.90 and 0.94 on each scale, and 0.92 on the total scale of life adjustment.

Emotional Intelligence Inventory (EII)

Emotional intelligence refers to an individual's ability to be aware of, express and adjust his/her own emotions and social relations, and then think and act constructively to adapt to the environment [6][7]. The EII of this study incorporates four factors [3][8][9]. First, facilitating thought: the ability to perceive emotions to think, choose, plan, solve problems and inspire, and improve self maturity. Second, emotional regulation:

the ability to control one's emotions, maintain positive emotions, be confident, conquer pressure, prioritise and be cautious when solving problems. Third, emotional communication: express one's true feelings and deal with problems appropriately. Fourth, emotional awareness: the ability to be open to feelings, understand the truth of it and be aware of others' emotions.

Life Adjustment Inventory (LAI)

Life adjustment refers to a process whereby individuals interact with the environment to meet physical, psychological and social needs, and achieve a harmonious state [10][11]. The LAI includes four factors, as follows:

- Personal adjustment: an individual's ability to know one's potential conditions, emotions and motivation behind certain behaviour, and to appreciate the value of oneself and others, and accept others' affection;
- Family adjustment: solving familial problems and the degree of happiness;
- Peer adjustment: admiring others, avoiding conflict, behaving appropriately, socialising with friends, willing to helping others, listening sincerely to others' opinions, being welcome among peers, etc;
- School adjustment: academic achievement and individual progress, obeying class rules [11-13].

Background Variables

On the basis of the relevant documentary research, the emotional intelligence was relevant to parents' degree of education, stable marital status, parenting style, familial atmosphere and family members [6][14][15]. In sum, the study take the degree of parents' education, marital status, parenting style and the birth order among siblings as the background variables for further investigation.

RESULTS

Sample Data

Table 1 shows the descriptive statistics for the questionnaires given in Taiwan and the Anhui province in mainland China.

Comparison

The mean scores and standard deviations of each item and the t-test results are listed in Table 2.

Table 1: The sample data (N = 1,060).

Background Variables	Item	N (People)		Percentage	
		Taiwan	Anhui	Taiwan	Anhui
Parents' education level	1. Above academic	178	244	30.8	50.6
	2. High school	293	194	50.7	40.9
	3. Below junior	107	41	18.5	8.5
Parents' marital status	1. Live together	503	415	87.0	86.1
	2. Separated, divorced	51	61	8.8	12.7
	3. Widow	24	6	4.2	1.2
Parenting style	1. Democratic	462	359	80.0	74.5
	2. Indulgent	97	63	16.8	13.1
	3. Authoritative	18	60	3.0	12.4
Birth order	1. Elder	273	413	47.2	85.7
	2. Middle	118	29	20.4	6.0
	3. Younger	187	40	32.4	8.3

Table 2: t-test results for emotional intelligence by region.

Factor	Variable	n	Mean	SD	t-test
Facilitating thought	Taiwan:	578	45.54	6.45	-7.34***
	Anhui:	482	48.40	6.12	
Emotional regulation	Taiwan:	578	40.90	6.03	-3.89***
	Anhui:	482	42.34	5.99	
Emotional communicate	Taiwan:	578	38.32	5.53	-8.87***
	Anhui:	482	41.44	5.91	
Emotional awareness	Taiwan:	578	41.00	5.34	-9.63***
	Anhui:	482	44.16	5.29	
Total	Taiwan:	578	165.76	18.17	-9.51***
	Anhui:	482	176.34	17.87	

***p<0.001

The table shows a significant difference between students in Taiwan and Anhui province regarding their emotional intelligence. An independent two-tailed t-test revealed the difference between the students in Taiwan and Anhui province to be statistically significant where the calculated t (9.51) was larger than the $t_{critical}$ (1.98) at the 5% significance level. The result showed that students in Anhui did better than those in Taiwan with the difference being statistically significant.

A two-tailed t-test for life adjustment was also undertaken. Table 3 lists the results of this analysis and evaluation of the components and showed that senior high school students in Anhui province did better than those in Taiwan, with the difference being statistically significant at the 5% level, where t (6.89) was greater than $t_{critical}$ (1.98) for df = 1,058, with p<0.05.

Table 3: t-test for life adjustment by region.

Factor	Variable	n	Mean	SD	t-test
Person	Taiwan:	578	24.15	4.15	-10.61***
	Anhui:	482	26.89	4.24	
Family	Taiwan:	578	25.29	5.60	-2.95**
	Anhui:	482	26.38	6.32	
Peer	Taiwan:	578	24.43	4.14	-3.53***
	Anhui:	482	25.27	3.37	
School	Taiwan:	578	23.76	4.16	-2.74**
	Anhui:	482	24.47	4.33	
Total	Taiwan:	578	97.64	12.53	-6.89***
	Anhui:	482	103.02	12.81	

***p<0.001; **p<0.01

Analysis of Variance (ANOVA)

The average scores were analysed using ANOVA so as to compare the differences in the background variables between students in Taiwan and Anhui. The results of ANOVA for Taiwanese students showed there was no significant difference for all the background variables in emotion intelligence, ie parents' education level ($F_{.95(2,575)}=2.27$), parents' marital status ($F_{.95(2,575)}=0.56$), parenting style ($F_{.95(2,575)}=2.37$) and birth order ($F_{.95(2,575)}=0.02$). A posteriori comparisons of Scheffé values indicates that lower degree education is better than high degree education in the emotional awareness factor ($F_{.95(2,575)}=4.66^*$) of the EII. Regarding parenting style, a posteriori comparisons of Scheffé values indicates that the democratic style is better than the indulgent style regarding the emotional communication factor ($F_{.95(2,575)}=3.92^*$) of the EII.

A significant difference was found for the background variables of emotion intelligence, ie parents' education level ($F_{.95(2,479)}=4.89^{**}$), parenting ($F_{.95(2,479)}=7.22^{**}$) and birth order of sibling ($F_{.95(2,479)}=3.06^*$). A posteriori comparisons of

Scheffé values indicates that a higher degree of education is better than a lower degree for the emotional awareness factor of the EII in Anhui. Regarding parenting style, a posteriori comparisons of Scheffé values indicate that the democratic style is better than the authoritative style while the indulgent style is better than the authoritative style for the EII emotional communication factor. It was found that younger is better than older in birth order for the emotional communication factor. No significant difference was found for parents' marital status. A posteriori comparisons of Scheffé values indicates that living together is better than separation (or divorce) for students' emotional awareness ($F_{.95(2,479)}=3.09^*$).

The ANOVA results for Taiwanese students show there to be no significant difference for the background variables in life adjustment, ie parents' education level ($F_{.95(2,575)}=0.94$), parents' marital status ($F_{.95(2,575)}=0.28$) and birth order ($F_{.95(2,575)}=0.03$) – except parenting style ($F_{.95(2,575)}=6.93^{***}$). A posteriori comparisons of Scheffé values indicate that the democratic style is not only better than the authoritative style, but the democratic style is also better than the indulgent style.

The ANOVA results for Anhui students show there is no significant difference in the background variables in life adjustment, ie parents' education level ($F_{.95(2,479)}=11.49^{***}$), parents' marital status ($F_{.95(2,479)}=5.18^{**}$) and parenting style ($F_{.95(2,479)}=10.22^{***}$) – except birth order ($F_{.95(2,479)}=1.69$). A posteriori comparisons of Scheffé values indicate that a higher education level is better than a lower education degree, and living together is better than separation (or divorce). For the parenting style factor, the democratic style is better than the authoritative style. Both family adjustment ($F_{.95(2,479)}=9.39^{***}$) and peer adjustment ($F_{.95(2,479)}=8.05^{***}$) achieved significant differences for the aspect of birth order.

DISCUSSION AND CONCLUSION

Four conclusions can be drawn from the results. Firstly, the average score per item on the EII was 3.38 for Taiwanese students and 3.6 for those from Anhui. This shows that both groups were good at every factor regarding emotional intelligence. In order, scoring of the four EI factors were facilitating thought, emotional awareness, emotional regulation and emotional communication.

Secondly, the average score per item on the LAI was 3.25 for Taiwanese students and 3.43 for Anhui students. These results indicate that both groups were good on every factor. In order, the Taiwanese students' scoring of the four LA factors was peer adjustment, school adjustment, family adjustment and person adjustment. For those from Anhui, the scoring order was peer adjustment, family adjustment, school adjustment and personal adjustment.

Thirdly, a scatter diagram was drawn and the Pearson correlation coefficient was subsequently estimated to determine any correlation between the factors. A positive and modest correlation, $r=+0.53$, $r=+0.75$, was found in the scores of both the EII and LAI. This correlation is statistically significant at the 5% level. Both were indeed statistically significant for every item. The results of this study are similar to those found elsewhere [4][16-18].

Finally, a survey on schoolwork assignments and school pressure has shown that students in Taiwan complain about the heavy load of tests, assignments and school pressure more than those in Anhui do [19]. However, the time that Taiwanese

students spent on the assignment and study was less than that of Anhui students. Both groups share the same determination to enter top-ranked universities, which is an interesting phenomenon. The researchers conclude that the emotional intelligence and life adjustment are linked.

RECOMMENDATIONS

From the results listed above, key recommendations for further study and for educators of senior high school are listed below.

Recommendations for schools are as follows:

- According to the results of this study, students' emotional intelligence and life adaptation are related. School administration could put emotional control lessons into the curricula to profile students' education concerning emotional control;
- Conduct a student consulting programme to reinforce students' abilities for emotional control;
- Provide gender education of mutual learning to help students learn how to deal with people;
- Undertake family educational activities and answer parents' questions so that they can take advantage of the activities to acquire the exact concepts of emotional education and proper life adjustment capabilities;
- Promote class activities, such as outdoor education, parents' day, etc, to facilitate consultation with parents and establish positive communication between the teacher and students.

Recommendations for students are as follows:

- Actively pursue student affairs and group activities;
- Increase the interaction between fellow students and reinforce communication abilities to improve relationships.

Recommendations for teachers are as follows:

- Facilitate students' self emotion control, classroom management and emotional consulting abilities to reduce the adverse effects of students' emotional disorders and bad adaptation;
- Cultivate the students' improved emotional management; this requires teachers to update their own emotional control abilities. Otherwise, teachers should be encouraged to participate in education consultation, career training and develop operational research to enhance personal emotional control and related professional knowledge to achieve higher educational effectiveness;
- Integrate daily interaction with people in all curricula in order to improve self understanding.

Recommendations for families are as follows:

- Facilitating a positive family environment is not just the parents' responsibility; increase interaction between parent and children should be increased to augment life-adjustment abilities;
- Engage in the school's parenting activities to heighten children's emotional intelligence and promote the ability of recognise and control personal emotions;
- Understand their child's personal character and abilities. Train their children to possess multiple capabilities and interests, foster their child's learning activities, know what they he/she is learning and provide some help.

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