FACTORS AFFECTING THE EMOTIONAL INTELLIGENCE OF PRIMARY SCHOOL (PRATHOMSUKSA 3) STUDENTS IN MUANG DISTRICT, NONTHABURI PROVINCE, THAILAND

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ABSTRACT:

Background: In 2016 the average EQ level was about 45.12 (the standard level of EQ was changed from 140 to 50). Therefore the problem of the EQ of students has increased dramatically. Not only that, in 2009, the children living with both their parents decreased from 62%. This study aimed to: 1) study the EQ level; 2) assess the socio-demographics, time spending, and type of parenting, school environment and EQ level; 3) identify any associations among socio-demographic, time spending, type of parenting and school environment that affect the EQ level.

Methods: This research study was a cross-sectional study. Participants comprised 410 parents of Prathomsuksa 3 students. Instrument was a questionnaire that comprised four parts (Part 1: Socio-demographic factors and time spending; Part 2: Type of parenting; Part 3: School environment; Part 4: The EQ assessment), by multistage sampling technique with purposive sampling by criteria selection at Nonthaburi province to choosing four schools, the participants were surveyed during June-July 2017. Descriptive analysis and Fisher's exact test were used to analyze the data.

Results: Regarding the socio-demographic factors, 350 students (85.4%) had a GPA more than 3.51 and the most common income for families was between 25,001 - 40,000 baht (314 families, or 76.6%). Concerning the time spending, parents who spent 4 or more than 4 hours per day stood at 258 students (62.7%) on workdays and 268 students (65.4%) on weekends respectively. Finally, the democratic style was the most common style (358 families, or 87.3%).

Conclusion: The total EQ level followed the same direction with most students having an EQ at the normal level (389 students, or 94.9%). Regarding the associations between socio-demographic factors (GPA and family income), time spending, type of parenting and EQ level, there were statistically significant differences ($p<0.05$). However, there was no statistically significant difference between school environment and EQ level ($p>0.05$).

Keywords: Emotional intelligence; Primary school; Students; Thailand

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INTRODUCTION

The education system in the world today focuses on children and youth development in terms of enhancing a valuable human resource – both the body and the mind as concerns Emotional Intelligence or Emotional Quotient (EQ). Intelligence Quotient (IQ), Expertise and EQ have all been identified as important factors supporting success in life and work [1]. EQ, according to the Department of Mental Health, Ministry of Public Health Thailand, is the ability to live together with others creatively and happily [2]. There are three elements: goodness, smartness and happiness [3]. In the

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United Nations Sustainable Development Goals (SDGs) goal 3 is as follows: "Good health and well-being: ensure healthy lives and promote well-being for all". This is further complemented by with the element number 9 of The World Health Organization which focuses on mental health issues. Correspondingly, Thailand also sets out The National Social and Economic Development Plan which relates to the SDGs that concern human well-being in Thailand.

EQ problems among students in primary school have continued to increase [1]. A survey on students' IQ and EQ [4] showed the lowest total EQ scores for Thailand in 2002, 2007, 2011 with continuing dramatic decreases. In 2016, a survey of EQ among students aged between 6-11 years old in Thailand found that the EQ to be about 45.12 – under the standard EQ level of 50 [5]. When divided by region in Thailand: each region had a similar average EQ score under the standard [6].

Concerning the family, a 2009 survey found that children living with both parents (father and mother) was decreasing, at 62% but declining steadily at 1.4% per year [7]. Not only that but in more than 1.4 million households children lived with elderly guardians without both parents, and this increased 6.68% per year [8].

EQ has become subject to much psychological research over recent years, especially in terms of how it affects today's workforce. The age range of 6-11 years is an important period in which EQ needs to be developed for children to become well-rounded adults. The statistics reveal many problems and situations regarding EQ but we don't know what factors affect the EQ of children. Many researchers conducted research concerning only the benefit of EQ, such as adaption to society and people. Some research has shown IQ can help individuals be successful for up to 20% in life, while the rest, the 80%, success is down to EQ. If the factors affecting EQ are identified, an appropriate EQ can be developed and promoted among Thai children. People who have greater EQ have mental well-being, good relationships and success in their life. As concerns how time is spent, if children spend more quality time with parents in a good relationship, their EQ levels will develop [9]. Children develop their emotions, are able to manage their own emotions and maintain relationships with others in accordance with the parenting behaviors of their parents. Positive personal behavior is related to the high level of EQ of children [10]. Not only that, school environment is another key factor. Both inside and outside of the classroom environment is important in enhancing the EQ of children and it can teach children to build relationships with others [11]. For this research, primary school (Prathomsuksa 3) students in Muang district in Nonthaburi province, Thailand were chosen as the maximum age for developing EQ is 11 years old. The aim was to identify the factors affecting EQ level before this given age [12]. Nonthaburi had a lower average EQ score than standard and so was an area appropriate for researching the factors affecting EQ levels of primary school students [13].

METHODOLOGY

Population and sample group

This research was a cross-sectional study. Participants were parents of Prathomsuksa 3 students who met the inclusion criterion such as who had an educational background of Prathomsuksa 6 or higher. For the exclusion criteria such as who had depressive and schizophrenia illness. The sample size was determined using the Taro Yamane formula at 95% confidence level, $\alpha = 0.05$ from the total number of students who studied at primary school (Prathomsuksa 3) level in Nonthaburi in Thailand. In 2016, the number of students studying at primary school (Prathomsuksa 3) level in Nonthaburi was 2,518 students. Therefore, the sample size for this study was 410 students and their parents as follows: at first, the researcher used the multistage sampling technique with purposive sampling by criteria selection at Nonthaburi, Thailand. The Prathomsuksa 3 level in Nonthaburi has 2 primary educational services and one services area was thus selected by criteria selection. Then, simple random sampling was used to determine two groups by size of schools. Finally, four schools were chosen by simple random sampling and the sample was calculated by being proportionate to size. Therefore, the population of this research (parents) comprised 258 participants, 80 participants, 54 participants and 33 participants, respectively.

Measurement tool

The questionnaire used in this study consisted of three parts:

(1) Information about the socio-demographic factors of participants including the gender and age of parents, the gender, age and GPA of the child, family income, marital status of parents, number of siblings living in their house and time spent together totaled 12 questions;

(2) Information about parenting style in accordance with Hurlock's Parenting Theory (1984); (3) style of parenting was separated into 3 types: the democratic, authoritarian and permissive methods and totaled 30 questions. Four choices were given to answer the questions as follows: never, rarely, usually, and always;

(3) Information about the school environment of participants to help explain the relationships between teachers/friends and students, totaling 10 questions. Five choices were given as choices to the positive and negative questions as follows: never, rarely, sometimes, usually, and always. As regards the score, this was translated into 3 groups as follows: 36.68 – 50.00: good, 23.34 – 36.67: fair and 10.00 – 23.33: poor by (max-min)/ interval formula;

(4) The 2013 EQ assessment from the Mental Health Department, Ministry of Public Health totaling 15 questions to measure EQ according to the following three elements: goodness, smartness and happiness [14]. These positive and negative questions had 4 choices of answers: never, sometimes, often and always. The assessment scores summarized every question and ascertained the averages. For the validity and reliability, the questionnaires were discussed, cross-checked and thoroughly checked for flaws with three experts. Then, questions were chosen with an index of item-objective congruence (IOC) of more than 0.667 from the socio-demographic factors and time spent together section (12 questions), style of parenting section (30 questions) and school environment section (10 questions). All questions scored between 0.67 – 1.00, so the researcher could choose all questions. After that, a sample of 30 were selected to try out the questionnaire. The reliability was calculated using Cronbach's alpha coefficient. The alpha coefficient tested for attitude and satisfaction for the sample size of 30 was significant (style of parenting = 0.943 and school environment = 0.887).

Data collection

The data from the questionnaire were collected as follows. Questionnaire parts 1-4 were collected from the parents or those taking care of children of the primary school students at Muang district in Nonthaburi province, Thailand. If they could not understand the questionnaire the researcher added further explanation or further interview instead. The period of data collection lasted two months from June-July 2017.

Data analysis

Descriptive statistics were used to describe frequency, percentage, mean, and standard deviation. Fisher's exact test with a 0.05 statistical significance level was used to determine the relationships between socio-demographic characteristics, time spent together, style of parenting, school environment and EQ level. SPSS version 16 was employed for all data analyses.

Ethical consideration

The proposal was approved by the Ethics Committee of College of Public Health Sciences and Chulalongkorn University COA No. 130/2560. The research informed the purpose of study to students and their parents before performing questions. The confidentiality of participants in this study, the name and the personal information of participants were not mentioned and not available in this study.

RESULTS

Socio-demographic factors

The socio-demographics of participants are shown in Table 1. Of 410 participants, 322 were female (78.5%). Most students were aged 9 years old (70.7%). Those with a GPA between 3.51 - 4.00 stood at 350 students (85.4%). Regarding family income, this was between 25,001 - 40,000 baht for the majority (314 families, or 76.6%), and most students lived with both parents (278 students, or 67.8%). Not only that, but more than 50% had only one sibling.

Time spending

The majority of time spent with the child per day on workdays and weekends were similar: 4 hours or more than 4 hours with their child for 258 families (62.7%) on workdays and for 268 families (65.4%) on weekends. Concerning the activities with their child when parents had leisure time, they'd watch TV/listen to the radio similarly on workdays and weekends –124 families (30.2%) on workdays and 197 families (48.0%) on weekends.

Type of parenting

The most of parents were parenting to students with the Democratic type of parenting 358 families (87.3%). Next, Permissive type of parenting 41 families (10.0%) and the last, Authoritarian type of parenting 11 families (2.7%).

School environment

The relationship between teacher, friends and students were good 342 students (83.4%), fair 68 students (16.6%) and do not have poor relationship among them (Mean 41.02 and S.D. 3.28).

Table 1 Characteristics of sample students

	Number	%
Gender of parents		
Male	135	32.9
Female	275	67.1
Age of parents (years)		
< 35	56	13.7
36-45	192	46.8
> 46	162	39.5
Mean = 42.09, SD = 5.49		
Gender of children		
Male	88	21.5
Female	322	78.5
Age of children (years)		
8	3	0.7
9	290	70.7
10	114	27.8
11	3	0.7
Mean = 9.29, SD = 0.48		
Grade point verage (GPA)		
< 3.00	18	4.4
3.01 – 3.50	42	10.2
3.51 – 4.00	350	85.4
Mean = 3.74, SD = 0.45		
Family income (Baht)		
Less than 10,000	15	3.7
10,001-25,000	48	11.7
25,001-40,000	314	76.6
More than 40,000	33	8.0
Marital status of parents		
Live with both parents	278	67.8
Live with father only	6	1.5
Live with mother only	67	16.3
Live with elderly or relative	59	14.4
Number of sibling		
1	208	50.7
2	141	34.4
3	55	13.4
4 or more than 4	6	1.5
Time spending with your child per day (Monday – Friday)		
Less than 2 hours	7	1.7
2-3 hours	146	35.6
4 or more than 4 hours	258	62.7
Mean = 2.61, SD = 0.52		
Activities with your child (Monday - Friday)		
Play game	77	18.8
Entertain such as watch TV/listen to the radio	124	30.2
Discuss with family	60	14.6
Household work such as household/kitchen/garden	92	22.4
Outdoor activities	57	13.9
Time spending with your child per day (Saturday-Sunday)		
Less than 2 hours	40	9.8
2-3 hours	102	24.9
4 or more than 4 hours	268	65.4
Mean = 2.56, SD = 0.67		

Table 1 Characteristics of sample students (cont.)

	Number	%
Activities with your child (Saturday-Sunday)		
Play game	27	6.6
Entertain such as watch TV/listen to the radio	197	48.0
Discuss with family	52	12.7
Household work such as household/kitchen/garden	79	19.3
Outdoor activities	55	13.4
Type of parenting		
Democratic	358	87.3
Authoritarian	11	2.7
Permissive	41	10.0
School environment		
Good	342	83.4
Fair	68	16.6
Poor	0	0
Mean = 41.02, SD = 3.28		

The EQ assessment

The EQ assessment measured the EQ level of students using three components (nine sub components) as follows: goodness, smartness and happiness. Regarding the total EQ level, most students had an EQ at the normal level (389 students, or 94.9%), followed by under the normal level (18 students, or 4.4%) and above the normal level (3 students, or 0.7%). If each component is separated according to the results of the three components, the direction was similar as follows: most students had an EQ at the normal level, followed by under the normal level and above the normal level. Regarding goodness, there were 368 students (89.8%), 26 students (6.3%) and 16 students (3.9%), respectively. Concerning smartness, there were 363 students (88.5%), 29 students (7.1%) and 18 students (4.4%), respectively. As regards happiness, there were 356 students (86.8%), 35 students (8.5%) and 19 students (4.6%), respectively.

For the result of Fisher's Exact test, there were association between Socio-demographic characteristic factors (Grade point average factors and Family income) ($p<0.05$), Time spending factors ($p<0.05$), Type of parenting ($p<0.05$) and EQ level (Table 2).

DISCUSSION

Almost all students (389 students, or 94.9%) had an EQ score at the normal level. This is consistent with the EQ assessment by The Ministry of Public Health (2016) in Thailand of 23,274 students at primary school (Prathomsuksa 1) level in all regions of Thailand. That research found that most students had EQ scores at the normal level (14,907 students, or 64.1%) [15]. The reason the numbers for the EQ levels differed slightly from the research of The Ministry of Public Health was because the researcher conducted the survey in Muang district in Nonthaburi and more than 70% of that area is urban. Most families performed well in parenting their children and the social environment was highly conducive to learning. The reason that has important reason to benefit to support the EQ level are policies from government that transfer to many ministry [16]. GPA was associated with EQ level; while more than 80% of students had a GPA between 3.51 – 4.00, students with normal EQ levels comprised more than 90%. Therefore, students with high GPAs have EQs at the normal level because they learn to control and express their emotions, and learn to build relationships between teachers and friends. Family income was also associated with EQ level. More than 80% of parents had an income of more than 25,000 baht, and families with incomes of more than 40,000 baht particularly had children with EQ normal levels at 100%. This can be interpreted as meaning that 1) money was the one factor affecting the parenting of their children, 2) most students live with high performance to parenting their children in food, support everything and emotion of everyone in their family without money problem. This is consistent with the research by Boonpan [17] who identified a correlation between EQ and learning achievement in the sciences at primary school. The results of time spent together and activities that parents spend with their child a day – both workdays and weekends – were associated with EQ level, with most students with an EQ at normal level. Communication between children and parent affects the development of the

Table 2 Analyze between factors and EQ level

	Total Sample	EQ level						*p*-value
		Under normal		Normal		Over normal		
		Number	%	Number	%	Number	%	
Gender of children								0.696
Male	88	3	3.4	84	95.9	1	1.1	
Female	322	15	4.7	305	94.7	2	0.6	
Age of children (years)								0.102
8	3	1	33.3	2	66.7	0	0	
9	290	9	3.1	278	95.9	3	1.0	
10	114	8	7.0	106	93.0	0	0	
11	3	0	0	3	100.0	0	0	
Grade point average (GPA)								<0.001
< 3.00	18	7	38.9	11	61.1	0	0	
3.01 – 3.50	42	5	11.9	37	88.1	0	0	
3.51 – 4.00	350	6	1.7	341	97.4	3	0.9	
Family income (Baht)								0.028
Less than 10,000	15	3	20.0	12	80.0	0	0	
10,001-25,000	48	5	10.4	43	89.6	0	0	
25,001-40,000	314	10	3.2	301	95.9	3	1.0	
More than 40,000	33	0	0	33	100.0	0	0	
Marital status								0.192
Live with both parents	278	8	2.9	268	96.4	2	0.7	
Live with father only	6	0	0.0	6	100.0	0	0	
Live with mother only	67	6	9.0	60	89.6	1	1.5	
Live with elderly or relative	59	4	6.8	55	93.2	0	0	
Number of sibling								0.244
1	208	6	2.9	201	96.6	1	0.5	
2	141	9	6.4	130	92.2	2	1.4	
3	55	2	3.6	53	96.4	0	0	
4 or more than 4	6	1	16.7	5	83.3	0	0	
Time spending (Monday-Friday)								0.001
less than 2 hours	7	2	28.6	4	57.1	1	14.3	
2-3 hours	146	9	6.2	136	93.2	1	0.7	
4 or more than 4 hours	257	7	2.7	249	96.9	1	0.4	
Activities with child per day (Monday – Friday)								<0.001
Play game	77	0	0	77	100.0	0	0	
Entertain such as watch TV/listen to the radio	124	8	6.5	115	92.7	1	0.8	
Discuss	60	6	10.0	54	90.0	0	0	
Household work such as household/kitchen/garden	92	2	2.2	88	95.7	2	2.2	
Outdoor activities	57	2	3.5	55	96.5	0	0	
Time spending (Saturday-Sunday)								<0.001
Less than 2 hours	40	12	30.0	28	70.0	0	0	
2-3 hours	102	4	3.9	96	94.1	2	2.0	
4 or more than 4 hours	268	2	0.7	265	98.9	1	0.4	
Activities with child per day (Saturday-Sunday)								<0.001
Play game	27	8	29.6	18	66.7	1	3.7	
Entertain such as watch TV/listen to the radio	197	1	0.5	195	99.0	1	0.5	
Discuss	52	6	11.5	45	86.5	1	1.9	
Household work such as household/kitchen/garden	79	2	2.5	77	97.5	0	0	
Outdoor activities	55	1	1.8	54	98.2	0	0	

Table 2 Analyze between factors and EQ level (cont.)

	Total Sample	EQ level						*p*-value
		Under normal		Normal		Over normal		
		Number	%	Number	%	Number	%	
Type of parenting								<0.001
Democratic type	358	7	2.0	349	97.5	2	0.6	
Authoritarian type	11	1	9.1	10	90.9	0	0	
Permissive type	41	10	24.4	30	73.2	1	2.4	
School environment								0.083
Fair	68	6	8.8	61	89.7	1	1.5	
Good	342	12	3.5	328	95.9	2	0.6	
Poor	0	0	0	0	0	0	0	

EQ level of their children and also raises EQ to the normal level as long as they stay together. This is especially true for children in primary school where they are at the learning and development age. This is consistent with the concept of Collins (2016) concerning people who spend quality time with parents or relatives [9] and the concept of Hanmetee [10] who asserted that parents should let your children play with friends or the parents themselves. This encourages children to learn about sharing toys with friends or others and helps children learn about good relationships with others. As for parenting style, most parents adopted the democratic style. This is why children had EQs at the normal level because they had the opportunities to learn about reason, make decisions from their thinking or discuss by themselves the best way to develop EQ. However, for school environment factors, there was no association with EQ level. This is due to most school environments not using a system they should be. Schools are changing at a fast pace socially and most students are interested in social networks more than playing with friends like in the past [11].

LIMITATION

Due to limitation of time for the research, the study carried out only four schools in Muang District Nonthaburi Province Thailand. Hence, the findings of the study cannot be generalized to the whole of Thailand students. Another limitation is the research collected data based on the sample size of 425 students of four schools. So the results of the research cannot represent the whole EQ level in Thailand.

CONCLUSION

The study results showed that the EQ assessment measured the EQ levels of students according to the following three components (nine sub components): goodness, smartness and happiness. Most students had EQ scores at the normal level. Separated according to the three components these are 368 students (89.8%), 363 students (88.5%) and 356 students (86.8%), respectively. The total EQ level followed the same direction. Nearly all students (389 students, or 94.9%) had EQs at the normal level, too. Regarding the association between socio-demographic factors, time spent together, style of parenting, school environment and EQ level there were statistically significant differences between socio-demographic factors (Grade Point Average (GPA) and family income), time spent together, style of parenting and EQ level ($p<0.05$). However, there was no statistically significant difference between school environment and EQ level ($p>0.05$).

REFERENCES

1. Brackett MA, Mayer JD, Warner RM. Emotional intelligence and its relation to everyday behaviour. Personality and Individual Differences. 2004 Apr; 36(6): 1387-402. doi: 10.1016/S0191-8869(03)00236-8
2. Thailand, Department of Mental Health. The emotional intelligence of children. 2000. Available from: http:// www.moph go.th.
3. Emmerling DR. Guidelines for best practice. 2015. Available from: http://www.eiconsortium.org/
4. Gardner H. Emotional intelligence. 1983. Available from: https://www.learning-theories.com/emotional-intelligence-goleman.html.
5. Goleman D. The emotional intelligence of leaders. Leader to Leader. 1998; 1998(10): 20-6. doi: 10.1002/ ltl.40619981008
6. Kanjana T, Angsurot Y. The relation between personal behaviors, EQ, working environment and empowerment of nurse in private hospital. [N.p]; 2008.
7. Hurlock EB. The 3 style of parenting. 1984. Available from: https://books.google.co.th/books
8. Gore. The EQ and social skill development program of primary school level grade 6 students in USA. [N.p]; 2000.
9. Collins Dictionary. Time spending, quality time. 2016. Available from: https://www.collinsdictionary.com/

10. Hanmetee S. Creat child to genious in IQ, EQ with 7 senses. Rakluke smart parents magazine; 2016. Available from: http://www.rakluke.com/article
11. Chueasa K. The relationship between environment and maturity of Mathayomsuksa 3 student. [N.p]; 1993.
12. Sonnoi O, Pranee C. Multi-level analysis of variables influencing emotional quotient (EQ) of Prathomsuksa 5 students under the office of phichit educational service area. Silpakorn Educational Research Journal. 2010; 1(2): 282-93.
13. Lopes PN, Brackett MA, Nezlek JB, Schutz A, Sellin I, Salovey P. Emotional intelligence and social interaction. Pers Soc Psychol Bull. 2004 Aug; 30(8): 1018-34. doi: 10.1177/0146167204264762
14. Ramajitti Institute. EQ and development. Bangkok : Ramajitti Institute; 2016. Available from: http://www.ramajitti.com/research_project_IQ.php
15. Ministry of Public Health. The situation of IQ and EQ of children 2016. Available from: http://hpc9.anamai.moph.go.th/
16. Office of the National Economic and Social Development Board. The situation of year 2019-2013. Bangkok: the National Economic and Social Development Board; 2014.
17. Boonpan S, Sacholvijarn V, Intavimolsri P. The correlation between emotional quotient and learning achievement in sciences of primary school children grade 6 Bangsai Phra Nakhon Si Ayutthaya primary educational service area office 2. Journal of Education and Social Development. 2013; 9(1): 107-18.