OPTIMIZING CHILDREN'S EMOTIONAL QUOTIENT BY MONDAY-THURSDAY FASTING

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ABSTRACT

Education system in Indonesia has put too much emphasis on academic values or intelligence quotient, without paying sufficient attention to emotional quotient. Various studies have shown that the success of life is contributed largely (75%) by emotional quotient, while intelligence quotients only contributed as much as 4%. The purpose of this study was to disclose the correlation between Monday - Thursday fasting and emotional quotient. This study was a quasi experimental study using one group posttest control design. Samples were 25 students in Luqman Al-Hakim High School (LHHS), Pondok Pesantren Hidayatullah, Surabaya. Data were obtained by means of questionnaire, and were analyzed using product moment analysis. Results of this study showed that Monday-Thursday fasting is positively correlated to emotional quotient with r_{xy} values 1.4376, ranging between 0.90 - 1.00.

***Keywords**: Monday - Thursday fasting, emotional quotient*

INTRODUCTION

Education in Indonesia, from the lowest level of elementary school to higher education, puts too much emphasis on academic aspects. Education is merely aimed to improve intelligence quotient (IQ). Education has omitted the importance of emotional quotient that encompasses integrity, honesty, commitment, creativity, mental resiliency, wisdom, fairness, trustfulness, synergy or self-control, and bravery to face challenge and risks, while in the future the quality of human resource enriched with those characteristics is imperative (Agustian AG, 2001).

About the mid of 1990s, interesting discoveries were presented. Daniel Goleman (1996), a psychologist from Harvard University, reported his findings that a high degree of intelligence quotient did not warrant people to obtain a satisfactory wealth, status, happiness, and success of life. To obtain these ideals, another intelligence, emotional intelligence, is also necessary. A number of studies have proved that the success of life of a person is determined only 20% by intelligence quotient (IQ), while the remaining is determined by other factors (Tampubolon DP, 2001). A more recent and detailed study (Nggermanto A, 2001) found that at least 75% of success in human life is determined by emotional quotient, while only 4% contributed by the intelligence quotient. More studies on emotional quotient will be carried out further in 21st century, and results of those studies will have significant implications on each aspects of life, particularly education.

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Regarding with the importance of emotional quotient for life, including the life of children, a question on how to improve emotional quotient for children is imperative. Which approaches can be employed as alternatives to optimize emotional quotient of the children?

In Islamic Syariah, in addition to obligatory fasting (during Ramadhan or *puasa nadar*), there is also *sunnah* fasting, one of which is the fasting during the day of Monday and Thursday. A *sahabat* once asked Rasulullah SAW on Monday - Thursday fasting, and Rasulullah SAW answered, "Those days are the days when I was born, the days when I will be awakened and the days when the first revelation came to me" (HR Muslim) (Muslim, 1992). In other hadith, Rasulullah SAW said, "Any deed is submitted to Allah in the days of Monday and Thursday. I, therefore, wish that when my deeds are submitted, I am in the state of fasting" (HR Ahmad) (Sayyid S, 1985).

In addition to its ritual context, fasting also possesses a central essential function, that is to create a *taqwa* personality (QS Al Baqarah 183), a personality characterized with social attention, able to control anger and emotion, as well as full of forgiveness (QS Ali Imran 134). In short, the essence of fasting is the ability to control passion, which is in this context, creating human beings that have a reliable emotional intelligence.

Thus, fasting results in emotional intelligence, which is presenting as qualities of integrity, honesty, patient, wisdom, self-confidence, creativity, self-control, and future-oriented. All of these are in line with the identification of emotional intelligence as suggested by Daniel Goleman (1996). Further, he classified emotional intelligence into two major aspects, i.e., personal

competence and social competence. Personal competence comprises of self-consciousness, self-regulation, and motivation, while social competence comprises of empathy and social skill (Nggermanto A, 2001).

This study was undertaken to prove the influence of Monday - Thursday fasting on the improvement of children emotional quotient. It is expected that the application of Monday - Thursday fasting can serve as an alternative for optimizing children's emotional quotient whether at school, family or in the community.

METHOD

The type of this study was quasi experimental, using one group post test control design, with descriptive quantitative method, by which one variable, the students of Luqman Al Hakim High School (LHHS), was described. Those students practiced Monday - Thursday fasting continually for about 2 years. They practiced the fasting as what they did without any interference or treatment as those done in true experimental study.

The population was all students in LHHS year 2000-2001, comprising 200 students. To obtain sample homogeneity, those students were selected with the following criteria: age 16 - 20 years, physically and mentally healthy, not practicing meditation, no problems in body weight, and practicing Monday - Thursday fasting for about 2 years. After being selected, 25 students were found to be eligible to be enrolled in this study. Control group consisted of 25 healthy individuals of the same age range, taken by means of random sampling from population that did not meet the other criteria and never practiced Monday - Thursday fasting.

The instrument used in this study was adapted from emotional intelligence questionnaire developed by Jacqueline M Atkinson (1990) with reliability value of r = 0.71027. Collected data were analyzed using product moment correlation formula of

$$r_{xy} = \frac{XY}{N.SDx.SDy}$$

Note:

r_{xy} = correlation index between variables x and y
xy = result of multiplication between deviation scores of variables x and y
SDx = standard deviation of the variable x
SDy = standard deviation of the variable y
N = number of cases

RESULTS

Data were collected using two types of questionnaire. 1. The sample questionnaire, which was used to select samples. This type of questionnaire was given to the subjects, comprising all students of LHHS at Pondok Pesantren Hidayatullah, Surabaya, year 2000 - 2001, as many as 200 students. After homogeneity test, only 25 of those students were eligible to involve in this study. 2. The data questionnaire, which was aimed to obtain data from samples. This questionnaire was given either to treatment group who conducted Monday - Thursday fasting, and to control group that did not conduct the fasting.

The questionnaire contains 55 items of questions. Seven items were questions on sample criteria, while 48 items were those concerning emotional quotient, using physical or psychological indicators. Scores of each respondent can be seen in Table 1. Table 2 represents the product moment ranges and their interpretations.

Table 1. Score of each respondent

Respondentnts	X	Respondents	Y
1	60.00	1	103.00
2	66.00	2	105.00
3	71.00	3	105.00
4	66.00	4	101.00
5	67.00	5	114.00
6	68.00	6	99.00
7	68.00	7	96.00
8	64.00	8	106.00
9	68.00	9	97.00
10	72.00	10	102.00
11	61.00	11	62.00
12	64.00	12	104.00
13	65.00	13	100.00
14	72.00	14	111.00
15	70.00	15	116.00
16	67.00	16	116.00
17	64.00	17	121.00
18	71.00	18	105.00
19	67.00	19	121.00
20	65.00	20	114.00
21	64.00	21	114.00
22	61.00	22	125.00
23	65.00	23	107.00
24	58.00	24	110.00
25	64.00	25	117.00
Total	1,652.00	Total	2,671.00

Results of the correlation between Monday - Thursday fasting with emotional quotient were subsequently analyzed using 2 methods of interpretations, i.e., (1) simple interpretation with correlation value (r) and (2) interpretation with index value of product moment. The guidelines to determine correlation between both variables were:

Table 2. Product moment ranges and their interpretations

Value of product moment r_{xy}	Interpretations
0.00 – 0.20	Weak or no correlation between x and y
0.20 – 0.40	Low correlation between x and y
0.40 – 0.70	Moderate correlation between x and y
0.70 – 0.90	High correlation between x and y
0.90 – 1.00	Very high correlation between x and y

Mechanism of analysis was undertaken by listing the variables x and y, and the values of each variables were added and averaged, with the results that Mx = 66.08 and My = 106.84.

Table 3. Correlation coefficient of Monday - Thursday fasting on children emotional intelligence

Respondents	X	Y	XY	X^2	Y^2
1	-6.08	-3.84	23.3472	36.9664	14.7456
2	-0.08	-1.84	0.1472	0.0064	5.3856
3	4.92	-1.84	9.0528	24.2064	3.3856
4	-0.08	-5.84	0.4672	0.00064	34.1056
5	0.92	7.16	6.5872	0.8464	51.2656
6	1.92	-7.84	15.0258	3.6864	61.4656
7	5.92	-10.84	64.1728	35.0464	117.5056
8	-2.08	-0.84	1.7492	4.3264	0.7056
9	1.92	-9.84	18.8929	3.6864	96.8256
10	5.92	-4.84	28.6528	35.0464	23.4256
11	-5.08	-44.84	227.7872	25.8064	2010.6256
12	-2.08	-2.84	5.9072	4.3264	8.0656
13	-1.08	-6.84	7.3872	1.1664	46.7856
14	5.92	4.16	24.6272	35.0464	17.3056
15	3.92	9.16	35.9072	15.3664	83.9056
16	0.92	9.16	84.2772	0.8464	83.9056
17	-2.08	14.16	29.4528	4.3264	200.5056
18	4.92	-1.84	9.0528	24.2064	3.3856
19	0.92	14.16	13.0272	0.8464	200.5056
20	-1.08	7.16	7.7328	1.1664	51.2656
21	-2.08	7.16	14.8928	4.3264	51.2656
22	-5.08	18.16	92.2528	25.8064	329.7856
23	-1.08	0.16	-17.28	1.1664	0.0256
24	-8.08	3.16	25.5328	65.2864	9.9856
25	2.08	10.16	21.1328	4.3264	103.2256
Total	0.00	(0.00)	469.1784	357.8400	3,607.3600

To find out the influence of Monday - Thursday fasting in the improvement of children's emotional quotient, the standard deviation (SD) and the coefficient correlation (r) were calculated from the tabulated results to demonstrate the strength of correlation between variables x and y was found to be 1.4736. After being referred to the r product moment, it could be concluded that, as 1.4736 was between 0.90 and 1.00, the correlation between x and y is significantly remarkable.

DISCUSSION

Results of this study showed that Monday - Thursday fasting had effect on children's emotional quotient, as indicated by the result of product moment analysis, which was r = 1.4736. This value was located between the range of 0.90 - 1.00, indicating strong correlation between variables x and y. On the other words, Monday - Thursday fasting may function as alternative approach for optimizing children's emotional intelligence.

Monday - Thursday fasting will be capable in optimizing children's emotional intelligence if it is conducted genuinely, seriously, continuously, and aimed to implement the moral message of the fasting. A fasting conducted by neglecting its moral message may lose all its effects, except only hunger and thirst. Rasulullah SAW said "Many people conduct fasting, but what they get only thirst and hunger, many people wake up and pray, but what they get only fatigue (Al Bukhari) (Sayyid S, 1985). Fasting is not only aimed for restraining from eating and drinking from the break of dawn until sunset, but also to control emotion as well as useless and disadvantageous deeds, and to prevent disputes with others (Muslim) (Sabiq S, 1985). If someone is fasting, and anyone else comes to make dispute, Rasulullah recommends to say, "I am fasting".

Every *ibadah* actually contains moral message. The importance of this moral message is reflected in the statement by Rasulullah SAW that the value of *ibadah* depends on how far its moral content is implemented. When one performs *ibadah* but shows no improvement in

his/her morality or emotional intelligence, Rasulullah SAW regarded that his/her *ibadah* is valueless.

In a hadits it was told that one day during the month Ramadhan, there was a woman scolded her maid. Rasulullah SAW heard about what she did to her maid. When at the same day the women came to visit Rasulullah SAW, he took some food and told the woman, "Here, eat this food." The woman answered, "But, Sir, I am fasting." Then, Rasulullah SAW said, "How come? You have just scolded your own maid. Indeed, fasting is preventing you from doing evils. How few those who are fasting, but how many those who get starved" (Al Hadits, cited by Rahmat J, 1996).

Rahmat (1985), citing a hadits, The Prophet once asked his friends, "Do you know who is a man in bankruptcy?" They answered, "For us, a man in bankruptcy is a man who lost his treasure and all his belongings". "No," said Rasulullah. "A man in bankruptcy is a man who at the judgment day comes with all rewards from his fasting, zakat, dan haji. But when those rewards are scaled, there comes another man complaining, "O, Allah, that man once accused me doing something that I did not do". Then, Allah orders the man to pay the accused man with some of his rewards. Then comes again another man with similar complain, and Allah orders the man with the same order. But, thereafter, other man come to Allah uninterruptedly protesting similar complains, until the man lose all his rewards. However, other men still come. Finally, Allah decides to remove the sins of those who complaining, and puts those sins to the man who has lost all his rewards. This is the man in bankruptcy at the judgment day, said Rasulullah SAW.

In psychoneuroimmunological viewpoint, relations between fasting and optimizing emotional intelligence can be explained as follows: Every human activity, either voluntary actions, such as eating, drinking, standing, seeing, thinking, praying, fasting, or doing evils; or involuntary actions, such as heart beat, digestive process, and blood production, are no more than a series of chemical process in the body. Organs carrying out this biochemical process work under neurohormonal control (Sholeh M, 2000).

The nervous system's role in body activities can be differentiated into two parts or systems, i.e., somatic/voluntary nervous system and autonomous/involuntary nervous system. It is the somatic nerves which serve organs that work voluntarily, or those whose works can be delayed or halted. Whereas, autonomous/involuntary nerves serve organs that work involuntary, as if they worked independently (Joesoef AA, 1996), although normally both nervous systems should work in harmonious cooperation.

Physiologically, somatic and autonomous nerves are located in central nervous system, particularly in the brain. Somatic nerves lies in the motor cortex, and autonomous nerves at the hypothalamus. Relations between both nerves are connected by motor association, which is the part of autonomous nervous system (Aran BR, 1970). Both nervous systems have no spontanoeous actions, since their activities are controlled by emotional factor located in the amygdala, lies at the lower part of the brain, whose size is as large as a peanut (Le Doux J, 1994).

Neurologists believe that hippocampus, which has long been regarded as the key of the structure of lymbic system, is apparently more related to recording and translation than to emotional reactions. The primary contribution of the hippocampus is to provide detailed memory on the context. In terms of emotional comprehension, it is the hippocampus that recognizes different meaning, such as differentiating snake at the zoo from that at the yard of a house (Goleman D, 1995). On the other words, hippocampus specializes in memory and recording, while amygdala specializes in emotion.

Various studies proved that a young man with removed-amygdala to cure his epileptic disease shows no interest and withdraws himself from human relations. Although he may be responsive to a conversation, he does not recognize friends, relatives, even his own mother. He remains passive even though he is at the state of anxiety. Without amygdala, he has lost all his sense of feeling. It is the amygdala that serves as a warehouse for emotional memory. Emotional meaning without amygdala, therefore, is a life without personality at all (Goleman D, 1995).

Ledrux J (1994) reveals that the architecture of the brain provides a special place for amygdala as the guard of emotion as well as the guard of the brain. Signals from eyes and ears pass through the brain to the thalamus, and through single synapse to the amygdala. Second signal from thalamus is transferred to cerebral neocortex. This pathway enables the amygdala to induce response prior to the response from neocortex. It may process information through several layers of cerebral tissue before the brain fully understands and starts processing response. This makes an individual being predominated by his/her emotion, instead of his/her ratio.

In his recent study, Le Doux (1995) found a smaller neuronal bundle that links thalamus with amygdala, in addition to neurons existing in larger neuronal channel directed to the cortex. The smaller and shorter bundle is

similar to a bypass that enables the nerves to receive inputs directly from the senses and to respond before those inputs are encoded by the cortex. It demonstrates that several emotional reactions and memory can be formed without any cognitive participation or deliberation. Amygdala may preserve memory and response receptor, rendering an individual to act without consciously realizing why he/she does that action, since the "toll road" from thalamus to amygdala is completely bypassing the neocortex.

Emotional intelligence may be obtained if the neuronal working mechanism connecting the thalamus to amygdala is controlled by left or right neocortex or by the presence of active participation of either left or right hemisphere. Monday - Thursday fasting carried out genuinely, seriously, and continuously, along with implementing its moral objectives, may control the action mechanism of the neuron, so that emotional hijacking that results in emotional carelessness may not occur. Emotional carelessness may result from the activation of either right or left neocortex without active participation of amygdala, or, conversely, from the activation of amygdala without active participation of right and left neocortex.

The essence of fasting is to control us from useless deeds, which may be devastating either to ourselves or to others. Emotional intelligence is also directed towards gaining capability in controlling emotion before taking any actions. In psychology, Skinner's Echo or operant conditioning theory suggests that the more frequent or the more intense something being echoed, or the more often an action done, the easier it is reflexively acted. This theory also prevails to the cells in human body. For example, an Indonesian can easily speak Bahasa Indonesia, while he/she finds troubles in pronouncing English properly. This is because the cells in “the tongue“ of an Indonesian have been long well-trained in speaking Bahasa Indonesia. Similarly, an Englishman may find difficulties in pronouncing Bahasa Indonesia. However, those difficulties will be gradually dissipated if the language is frequently echoed or habitually spoken.

Neuron cells that connecting thalamus to amygdala, which may hijack emotion that leads to careless behavior, may also be controlled due to controlling habit behavior during Monday - Thursday fasting. Endocrinologically, all activities of human being, either affected by willingness, such as eating, drinking, standing, seeing, thinking, praying, and doing evil, or those done voluntarily, such as heart beat, digestive process, blood production, etc., are no more than a series of chemical process in the body. Organs that operate this biochemical process work under the control of hormones.

When physiological changes occur (disruption of hormonal balance) due to fear, anger, frustration, stress, weakness, etc., it will be normalized by a strong faith, as a consequence of Monday - Thursday fasting that carried out genuinely, seriously, and continuously. A man, whose life is controlled by faith, is not easy to succumb to a frustrated life. Even Rasulullah SAW said that in all circumstances the faithful person is always good, since in happiness he is grateful, in sorrow he is patient, while both are good for him.

In other words, a faithful person will always live in peacefulness. The signal of peacefulness is transferred into the brain as positive perception (positive thinking). When brain is in a state of positive thinking, the thalamus can control hypothalamus, and the latter controls Adreno Corticotropic Hormone (ACTH). Controlled ACTH prevents the CRF (Corticotropine Releasing Factor) from further stimulating adrenal cortex to release cortisol, adrenalin and noradrenalin, and even vasopressin. The overproduction of these four hormones causes an individual to become short-tempered, to behave aggressively or offensively, and other emotionally careless behaviors.

CONCLUSION

We rebuild the paradigm that education does not anymore emphasize merely on the aspects of academic values or intelligence quotient and neglecting emotional intelligence. As shown by experience, human resource quality in Indonesia, as the products of education system used today, is characterized by split of personality and immorality, leading to prolonged multidimensional crisis from which we are still unable to escape. The crisis results from human behavior, while human behavior itself is a product of education. The crisis in behavior, therefore, is an indicator of the crisis in education.

To empower the children's emotional intelligence, which is including integrity, honesty, self-confidence, patience, and bravery to face challenge and risks, Monday - Thursday fasting should be carried out as one alternative approach. This study has proved a strong correlation between Monday - Thursday fasting and children's emotional quotient, in which the r_{xy} was found to be 1.4736, or between the range of 0.90 and 1.00.

Since Monday - Thursday fasting that carried out genuinely, seriously, and continuously may have a great advantage for children's emotional quotients, it is suggested for the parents and teacher to call their children and students for having a habit of fasting during Monday

and Thursday. To gain this objective successfully, parents and teachers should be those who first conduct the fasting, as an example for the children and students.

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