The Effect of Al Fatihah Reflective Intuitive Reading to Decrease Stress and Increase Immunity

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Abstract—Each stressor is interpreted differently by each individual. This depends on the point of view of individual meaning anchor. Adolescence is a developmental level which is characterized by looking for the identity phase. It makes an adolescent has a weak anchor. In positioning the anchor, perception plays an important role. Perceptions of anchor depends on the level of understanding of the individual. Stressors that come would affect the level of stress and immunity. Literature study showed the usage of the Quran as a mediator to reduce stress and increase immunity was still infrequent. This study aimed to investigate the effect of Al Fatihah reflective intuitive to stress and immunity level.

The study had been conducted through an experimental method with pretest-posttest control group design. A total of 10 boardingschool students become experimental group subjects and 10 other students become control group subjects. Stress was measured using Depression Anxiety Stress Scale (DASS) and immunity was measured using a microscopic slide method through hematology analyzer. Quantitative analysis was done through a mixed design ANOVA statistical test. Qualitative analysis was added through descriptive narrative qualitative analysis.

The results showed that “Al Fatihah reflective-intuitive reading” training could reduce stress ($f = 5.609$, $p = 0.029$) and increase immunity ($f = 25.6$, $p = 0.000$). This study also showed that Al Fatihah reflective-intuitive reading could provide peace and reminded of the existence of God in the life.

Keywords: Al Fatihah, Immune System and Stress

I. INTRODUCTION

Stress is an observable physiological and psychological reactions indicate the existence of pressure feeling, anxiety, and strain. Stress emerges as a response of environmental demand to an self and life individual to adapt subjectively towards the demand. The response has possibility to affect the balance in the body and triggering disorder and disease [10]; [11]; [36]; and [17].

The immunity is an illness protector especially from the one caused by infection. Physiologically, the function of the immune system is a defender from microbe infection attack. Studying the immune system can be achieved by studying the immune response. Immune Response related to how the immune system works to the immune response. Immune Response related to how the immune system works to the immune response. Immune Response related to how the immune system works to the immune response. Immune Response related to how the immune system works to the immune response. Immune Response related to how the immune system works to the immune response.

Several researches show the close relation between stress and desease. One of the example is the research on the relation between stress and heart desease risk on people with having acute or chronic stress [35]. Chronic stress also affects profoundly to the brain damage such as reducing the hypocampus volume and damaging memory [32]. Psychological pressure and increasing inflammation degradation causing the functional decline [44].

The current research to date, employing music instrument as an intervention in stress research and body immunity [3]; [26] and [40]. The literature study conducted by [15] shows that music can be used to help the healing process of schizophrenic. Music increases welfare, reduces stress, and altering the patient attention from unpleasant symptoms. Music affecting the physiological condition directly through the autonomous nerve [25].

In another side, Indonesia is a country with the biggest moslem community. Today, Indonesian is over 220 million with moslem as its majority. This condition creating a big question to the researcher of considering to use Al Quran as a form of intervention in healing various disorders particularly the psychological disorder.

In Indonesia, the interaction between the psychoneuroimmunology and the concept of religiously start to emerge lately. Belzen explains religiosity as elation connected to the higher power (God), religious activities and faith grounding it in [8]. [33] stated that there is a connection between soul and religion knowledge, and nervous system in increasing immunity. Religious knowledge approach can be in the form of prayer (shalat), remembrance (zikir), and reading Al Quran. A research shows that the faith in religion can be positively influence the healing process and health [23]; [24]; [27]; [35] and [37]. This is because the spiritual awareness helpscopewith the difficult situation and pain, and strengthen the belief in God which is internalized in their behavior in daily life.

Al Quran has a lot of significancies for healthy [16]. Reading Al Quran by using visualization and multimedia system can contribute to relaxation, erasing bored, tiredness, exhaustion, depression, and stress. Those effects are permanent and long lasting when the activity is carried out regularly and incessantly [26]. Al Fatihah is the most popular and learned by heart by the most moslem. Al Fatihah is
always read at least in every 5 praying times by the moslem. Al Fatihah place a high degree in Islam [4].

Teenage is a phase of an early step preparation to adulthood. Teenager faces various developmental tasks in the phase. According to [13], teenage phase is a time of a stressful moment in the daily life. Those stages including appearance issue, sexuality, school matters, life style, authoritarian parents, pressure from the peers, and problems related to money which make teenagers more vulnerable to stress. The demands and the duty of development emerge as the result of change happens to the individual functional aspect such as physical, psychological, and social. Individual who is fail in the adaptation process can undertake psychological disorder such as stress, fear, anxiety, aggressivity, and turn face to a maladaptive behavior [41].

According to Hood et al in [8], adolescence, at this stage, undergoing a faith in reflective-individualism. At this stage, one has an awareness in religion and be responsible to one own choice. In the stage of identity seeking, teenager has not had a strong anchor. According to [39] the helplessness and instability become source of incredible energy in order to reach the stability and their homeostatic. An individual will strive for something to be their anchor.

Perception is an impression caught out of certain situation and environment. Perception will be analyzed by the individual consiously. Stressor obtained will be organized and interpreted based on the anchor they believe so that individual realize and asss the stressor. Experience and perception is called as cognitive assessment by Selye in [36]. The cognitive assessment can be modified in many ways. One of which is by comprehension. According to Glock and Stark in [7], by the comprehension process, individual will be capable of analyzing what is happening and relate it to theirselves. According to [39] this will cause the individual interpreting the stressor from the point of view of their anchor. When their anchor is Allah, the existing stressor will be interpret as an eustress. The same thing will happen with other anchor. When the process is out of sync, distress happens. By employing Al Quran as media of combating those stressors, individual can comprehend the meaning and appreciate it so that a more possitive response is expected as the result.

Al Quran contains many aspects such as faith, prayer, knowledge, stories, philosophy and also principles governing the relation between human being either as individual or as the social beings [34]. Besides by changing the perception towards stress, immunity is also affected by calmness. Researches’ results showed that Al Quran can create the calmness as a result of decreasing anxiety [2]; [3]; [30]; [42]; [43] and [45]. Many findings in nowadays medical field such as the system of cardiovascular, fetus development, blood, and immunity are written in Al Quran [28]

The development of research about Al Quran has been conducted often. However, the a majority of the researches discussing the effect on listening to its verses only. Whereas [6] stated that Al Quran is conveyed not only to be heard but also tobe read orally. Al Quran is also needed to be considered and contemplated in the heart. Al Quran itself gives advise to read Al Quran such as:

“We will make you recite, [O Muhammad], and you will not forget(Al A‘laa 87:6)”

Many goodness and advises in reading Al Quran can be obtained if it done correctly. It mens that moslem should read it correctly by paying attention to its tartil. Tartil means not only to read it carefully but also try to understand the meaning inside the verses [20]. [6] mentioned that tartil in the context of reading Al Quran means slowly and carefully reading each letters and harakat.

The therapy effectivity by employing Al Quran depends on how the individual comprehends the meaning and appreciate what is read. Based on Craik and Lockhart theory in [31] of cognition processing level theory, information will tend to be more remembered if the processing level is deep. This is better when compared to the shallower process. The verses of Al Quran will be more integrated to one self if the semantic contain of the verses is understood. [34] said that the best healer for individual in this life is faith.

Reading Al Quran while reflecting it at the same time repeatedly is hoped to support the inrece of comprehension inside the individual so that it will strengthen their anchor to Allah. Related to the perception to stressor, the comprehension influences their dependence to Allah. Reading Al Quran, doing prayers, and pray can shape one correspone to what one read [43]. The faith to religion has a positive effect to the mental and physical health of the students [27]; [35] and [37]. Hence, it will have an effect to keep inside the body stability (homeostatic) [43].

Reading Al Quran and appreciate it create tranquility in one self. Tranquil feeling when reading it will strongly affected the body. Subject who always remember and surrender to Allah means having a good motivator to fight the disease [5].

Shensei’s shows that comfort feeling during listening to music decreases the exhaustion level while on treadmill. Although different gender reacts differently, it turns out that the combination between anger and stress related to the decline of immune function, there is no differences between male and female [12]. Stressor which is positively taken and a tranquil feeling will enter the hypothalamus. Hypotalamus will excrete realising hormone to stimulate endocryn system which controls the hypophysis that are adeno hypophys dan neuro hypophysis[1] and [29].

Adenohyphophysis will excrete trophic hormone which stimulates certain gland. One of the hormones is ACTH (Adrenocorticotropic Hormone) which stimulates the adrenal gland. Adrenal gland will release two kinds of hormones that is cortisol from the adrenal cortex and adrenaline hormone from the adrenal medulla. Cortisol is hormone indicator for one undergoing stress [1]. When stressor is understood as distress, it will reduce the amount of cortisol secretion. This hormone then suppresses the T cell activation (Freeman & Lawlis, 2001).

The observable indicator for immunity is the amount of neutrophil. Neutrophil is identified as a main inflammation cell mediators in immune system. Neutrophil has a mechanism regulation to control the inflamed area. The previous research shows that neutrophil play a role in oxydative and inflamation in smoker [1]. The first step of immune response is known as inflamation. When foreign material enters, it will attack the outer tissue. Inflamation response includes neutrophil and some other cells such as leucosyte, macrophage, mast cell, and also Natural Killer (NK). Inflamation response used to reduce and stop the entering
The foreign material going into the body (immunogen) will be responded by innate immunity especially by neutrophil which has phagocytosis characteristic. After the immunogen entering, all of the phagocyte cells will move to where the immunogen entered. The aggressive phagocytewill phagocyte the immunogen. The immunogen then integrate with granules with certain enzymes. This enzyme will destroy (degrade) immunogen [1].

Based on the previous explanations given, the researcher intends to create a model of Al Fatihah reflective-intuitive reading. By applying this method with the comprehension to the meaning and its appreciation will strengthen Allah anchor in individual so that the perception towards the stressor will turn out to be positive and creating tranquility. Therefore, the homeostatic condition will stay stable. The hypothesis of this research is that Al Fatihah reflective-intuitive reading is able to reduce stress level and improve the immunity status.

II. METHOD

A. Subjects

Subjects are 20 people with the following criteria having a medium, high and very high stress score, female, aged 16-18 years old and high schooleducated,

B. Measurement

This study used subscale of stress of DASS (Depression Anxiety Stress Scale). DASS was a valid and reliable measurement tool of stress [9]; [18] and [21]. The trial results analyzed with Cronbach's alpha had coefficient 0.888. Measurement of immunity used hematology analyser for counting the neutrophils in the blood cell.

C. Research Design

This study used a pretest-posttest design with control group design.

D. Research Procedures

A total of 20 subjects were divided into two groups: an experimental group and a control group using a random assignment. Subjects that have been placed in two groups given equal pretest to determine the condition of stress and immunity in each group before the experiment begin.

The training held for 8 sessions in 9 days. One session had been used to introduce the reflective-intuitive reading of Al Fatihah. Other sessions discussed the seven verses Al Fatihah, one verse of each session.

The experimental group had same training but there given special emphasis on understanding the meaning reflected into self and appreciation of the verse meaning that read. While reflective was reading by understanding Al-Fatihah’s verse meaning. Understanding the science reflected into the life process through the subject. The intuitive process was feeling sense of Al-Fatihah’s verse meaning that read.

Intuitive reflective training procedure was begin by making sure the experiment subject had done the duties before training such as taking a bath, eating and ablution. Subjects were asked to fill daily notes. Subjects were asked to intend with sincerity in reading the Quran for Allah SWT. Then subjects were doing istighfar, ask forgiveness to Allah. Subject did the humble process or demeaning themselves from improperly characters. Subjects read praying before starting reading the Quran.

Experimental activity followed by reading Al Fatihah three times independently with sound. Subjects could choose a place that makes them convenient. The facilitator then explained the meaning of the Al Fatihah verse that sheduled in each discussion session. Facilitator asked the subject to reflect the meaning of the Quran verses. The facilitator then explained the intuitive process. Subjects were asked to feel the meaning of the verse that they read.

Subjects then repeated Al Fatihah reading three times. Reading Al Fatihah followed by reflecting the meaning of Al-Fatihah verse into their life. The facilitator facilitated the subject to read the Quran by understanding the verse by verse from the Quran that they read. Subjects then filled “My Diary” to see the subject feelings and the subject perceptions changes after attended the session. The facilitator then reminded the subject to read Al Fatihah reflectively and intuitively 10 times after Maghrib, Isha and Fajr. Subjects were asked to fill the control book and tell what the subjects felt at that moment after finishing reading Al Fatihah.

Posttest was given immediately after the last session had done. Posttest was used to determine the subject’s condition after training. Experimental and control subjects given DASS posttest stress sub test and blood sampling. The collected data were analyzed by the researcher.

E. Analysis

The collected data were analyzed quantitatively and qualitatively. Quantitative analysis used mixed design ANOVA.

III. RESULT

A. Description of Research Subjects

- Data of subjects (Table 1)

B. Description of Research Data

- Quantitative Data

Description of research data is presented to determine the basic characteristics of the data relating to the research conducted. (Table 2)

C. Normality and Homogeneity of Verification Assumptions

Verification of normality was done by Kosmolgorov-Smirnov test. Verification of the ANOVA homogeneity according to [38], stated that anova including to the robust (strong) test against the interference heterogeneity of data, if the size of the second subject group was not too large. This indicated the existing data could be considered as homogeneous. (Table 3)

D. Hypothesis Testing

Hypothesis testing performed in this study using anova mixed method.

The table 4 showed that there was an interaction between stress score and the type of research groups (F = 5.609, p =
0.029). Intervention in the form of the Qur'an reflective-intuitive reading gave significant effect on the reduction of stress after intervention with effective contribution about 23.8%.

In the table 5, it could be seen that there was a significant interactions between immunity and the type of research groups (F = 25.6, p = 0.000). Intervention in the form of the Qur'an reflective-intuitive reading had significant effect on increasing immunity to the measurement after intervention with effective contribution about 58.7%.

E. Table

### TABLE I. CHARACTERISTIC DESCRIPTION OF RESEARCH SUBJECTS

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Details (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>8</td>
<td>40</td>
</tr>
<tr>
<td>17</td>
<td>9</td>
<td>45</td>
</tr>
<tr>
<td>18</td>
<td>3</td>
<td>15</td>
</tr>
</tbody>
</table>

### TABLE II. QUANTITATIVE DATA

<table>
<thead>
<tr>
<th>Skor</th>
<th>Experiment</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>SD</td>
<td>Max</td>
</tr>
<tr>
<td>StresPre</td>
<td>22,0</td>
<td>1,88</td>
</tr>
<tr>
<td>StresPost</td>
<td>14,0</td>
<td>5,65</td>
</tr>
<tr>
<td>NeutPre</td>
<td>4,37</td>
<td>1,36</td>
</tr>
<tr>
<td>NeutPost</td>
<td>5,28</td>
<td>1,35</td>
</tr>
</tbody>
</table>

### Fig. 1. Profile Group

![Stres](image)

### TABLE III. NORMALITY TESTING

<table>
<thead>
<tr>
<th>Group</th>
<th>Test</th>
<th>Stress</th>
<th>Immunity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Test</td>
<td>Statistic</td>
<td>P</td>
</tr>
<tr>
<td>Experiment</td>
<td>Pre test</td>
<td>0.200</td>
<td>0.178</td>
</tr>
<tr>
<td></td>
<td>Post test</td>
<td>0.170</td>
<td>0.207</td>
</tr>
<tr>
<td>Control</td>
<td>Pre test</td>
<td>0.198</td>
<td>0.226</td>
</tr>
<tr>
<td></td>
<td>Post test</td>
<td>0.246</td>
<td>0.228</td>
</tr>
</tbody>
</table>

* = normal

### TABLE IV. RESULT RESUME OF STRESS VARIANCE ANALYSIS USING MIX DESIGN

<table>
<thead>
<tr>
<th>Variance Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig</th>
<th>ETA2</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>198,025</td>
<td>1</td>
<td>198,025</td>
<td>8,813</td>
<td>0.008</td>
<td>0.329</td>
</tr>
<tr>
<td>Time*Group</td>
<td>126,025</td>
<td>1</td>
<td>126,025</td>
<td>5,609</td>
<td>0.029</td>
<td>0.238</td>
</tr>
<tr>
<td>Between Group</td>
<td>78,013</td>
<td>1</td>
<td>78,013</td>
<td>6,910</td>
<td>0.017</td>
<td>0.277</td>
</tr>
</tbody>
</table>

b Information: SS=Sum of Square; df=degree of freedom; MS=Mean Square; F=F value; ETA2=effective contribution of reading reflectiveneintuitive Al Fatihah to stress

### TABLE V. RESULT RESUME OF IMMUNITY VARIANCE ANALYSIS USING MIX DESIGN

<table>
<thead>
<tr>
<th>Variance Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig</th>
<th>ETA2</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>0,274</td>
<td>1</td>
<td>0,274</td>
<td>1,256</td>
<td>0,277</td>
<td>0,065</td>
</tr>
</tbody>
</table>
F. Qualitative Data

Qualitative analysis performed on the experimental group based on analysis of daily notes and observation during the training process. Subjects in the experimental group showed a prominent change in the results and have sense to be discussed qualitatively.

In general, participants felt that the training of the Quran Reflective-Intuitive reading was very useful to change their perceptions of daily or life stress. Training subjects also felt that this research helped them to remember back God. So far, God was often forgotten when happy and questioned when they were in need.

Evaluation from the facilitator was the implementation should be in a special place of worship. The goal was the subject could feel the atmosphere of training so that they could concentrate on following the training. Moreover, it would be better if the implementation of the program was in a holiday. So that they could prepare and would be able to concentrate.

Observer observed that all participants were enthusiastic during the training. In the training process, it could be seen that there were concentration and focus differences. There were subjects that could be focus and appreciate the process quickly. There were also the subjects that took more time to focus and appreciate. But in general all subjects could focus and appreciate the process eventually.

IV. DISCUSSION

Al Isra verse 82 says that the Qur'an is a drug or "As Shifa". [33] stated that there was a relationship of religious knowledge, psychological and immunity. Several recent studies indicated a positive influence of religious belief on mental and physical health [27]; [35] and [37]. This research was inspired by that verse and this research had determined the effect of Al Fatihah reflective-intuitive reading to stress and immunity.

In the modern medicine, disorders or diseases consisted of physical disorders and psychological disorders. The most prominent etiology of psychological disorders was stress and trauma. In the other hand, immunity was one of the most dominant contributor to the physical disorders beside organ damage [11]. Based on the results of the research, training of Al Fatihah reflective-intuitive reading has proven to be effective in reducing stress and increasing immunity significantly through the indicators of neutrophils number in the blood cells.

Training of Al Fatihah reflective-intuitive reading was appropriate to adolescents which are the characteristic of the subject in this research. According to Hood, et al in [8] adolescents were experiencing individuation phase-reflective faith. It meant that by doing reflective and intuitive processes, adolescents could increase their awareness on the religion and be responsible with every choice they take.

Stress is a distrested, anxious and tense feeling which can be seen from the physiological and psychological reactions. Stress emerged as a response of environmental demand to an self and life individual to adapt subjectively towards the demand. [10]; [11]; [17] and [36].

According to [39], the fault in positioning the anchor could cause psychological instability. When someone feel stressed, they lost the anchor they relied on all this time. When the anchor could not been relied on by the subject, subjects were always questioning where the God is. This training helped subject to look for their anchor through the reflection of God's goodness principle, God's love and God's affection all this time into their living process. Reflection helped subjects through the knowledge of God as the link to the anchor. This was because God is the ultimate anchor who had an unimaginable level of abstraction [39].

During the training process, subjects felt at peace, more refreshed, focused and able to concentrate. This was because the training of reading Al Fatihah was not only focus on the reflection, but also intuitive sense. Intuitive process would affect the reticular formation which functioned look into the information entering the brain before it had been relayed to the cortex. This made the subjects felt calm, refreshed, focused and able to concentrate. In the Quran, it has been written in surah Al Araf verse 204.

[22] stated that the Qur'an could give peace to whom reading it. This study also complemented the previous studies showing that listening to the Quran could lead to peace [2]; [3]; [14]; [30]; [42]; [43]; and [45].

This study showed an increase in subject's immunity after training of Al Fatihah reflective-intuitive reading, with the most significant stress changes. Relationship between stress and immunity because after training subjects did not experience immunodepression. Immunodepression suppress the immune system so the immune system could not evolve by itself. Neutrophils which were not depressed would increase its amount based on the immune response that would be faced later. Thus it made the subject to be well prepared in case of an inflammatory response in the body. Immunodepression may occur due to the increasing of cortisol level in the blood.

In the process of Al Fatihah reflective-intuitive reading, subjects experienced physiological proces by autonomic nerves. Behaviors such as moving the head, legs and ran a hand shake in arm showed the autonomous movements which are the physiological reaction of the Al Fatihah reflective intuitive reading. This study also showed that the Qur'an affected the physiological condition directly through the autonomic nervous system, same with the music that expressed by [25].

This study showed that reading Al Fatihah could increase immunity. This study complemented the previous study that more emphasised on listening Quran methods [30]. Al Quran itself had advocated reading the Quran as stated in the surah Al A'laa verse 6.

Neurologically, reading was more effective than only listening. When reading, the thalamus would be affected through the superior coliculus and inferior coliculus. When

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<table>
<thead>
<tr>
<th>Time*Group</th>
<th>5,550</th>
<th>1</th>
<th>5,550</th>
<th>25,6</th>
<th>0,000</th>
<th>0,587</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Group</td>
<td>0,015</td>
<td>1</td>
<td>0,015</td>
<td>0,009</td>
<td>0,926</td>
<td>0,000</td>
</tr>
</tbody>
</table>

Note: SS = Sum of Square; df = degree of freedom; MS = Mean Square; F = F-value; ETA2 = effective contribution of reading reflective intuitive Al Fatihah to neutrophil
listening, the thalamus only affected by one colliculus. By influencing the thalamus through two colliculi, it made the process of reading Al Fatihah would be more pronounced to the body than only listening to Al Fatihah itself.

The process of Al Fatihah reflective-intuitive reading that done routinely for 9 days could give the permanent and lasting effect. Repetition was associated with the HPA axis. When the HPA axis been activated continuously, a feedback loop would occur between the limbic system and the thalamus. Research of [26] stated that reading the Al Fatihah could provide relaxation and relieve boredom, fatigue, depression, stress long time if it was done continuously.

This research could be an alternative intervention method by psychologists. So far, many psychological studies used music to reduce stress [3]; [15]; [25] and [40]; Researcher realized the need for further research to conduct a comparative study of the results by two different interventions.

REFERENCES