

## **SECRETS OF QUR'AN INTERACTION AND BRAIN HEALTH**

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### **Abstract**

Allah created human beings with complex structures and functions. The more we try to dig into the brain, it will never end. Therefore, everything Allah made in every part of us is a sign of Allah's greatness that should be our contemplation together. A term states that understanding how the brain works are the main way to uncover the very essence of human beings. Character (morals or behavior) is the important thing that every human being must own, and we must observe and analyze that the brain is the center of human character. The brain is part of the composition of the central nervous system that works as a center for controlling human activities in the form of thinking, moving, behaving, feeling something, remembering, and so on. Without the brain, humans will not live, like inanimate objects, without any use and potential. Interactions with the Qur'an that humans do, such as reading, memorizing, listening, meditating, or contemplating the meaning of the Qur'an, will affect the function directly or indirectly. Even the structure and function of the brain itself, microscopically cellular, can be affected. Many studies have been conducted to prove how the effects of the Qur'an from listening, reading, and memorizing the Qur'an to brain function, especially in terms of brain waves and mental health. Health effects can be obtained very much before we interact with the Qur'an. If we analyze simply the stages of a person's activity before interacting with the Qur'an also indirectly has a positive impact on the body.

**Keywords : Qur'an interaction, brain health**

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## 1. INTRODUCTION

Allah created human beings with complex structures and functions. The more we try to dig into the brain, it will never end. Therefore, everything Allah made in every part of us is a sign of Allah's greatness that should be our contemplation together. Allah says:

الْقَائِمُ أَلَيْبِنَا لَا

"Then do you think that We created you for fun (only) and that you will not be returned to Us?" (Al Mu'minun: 115). 1

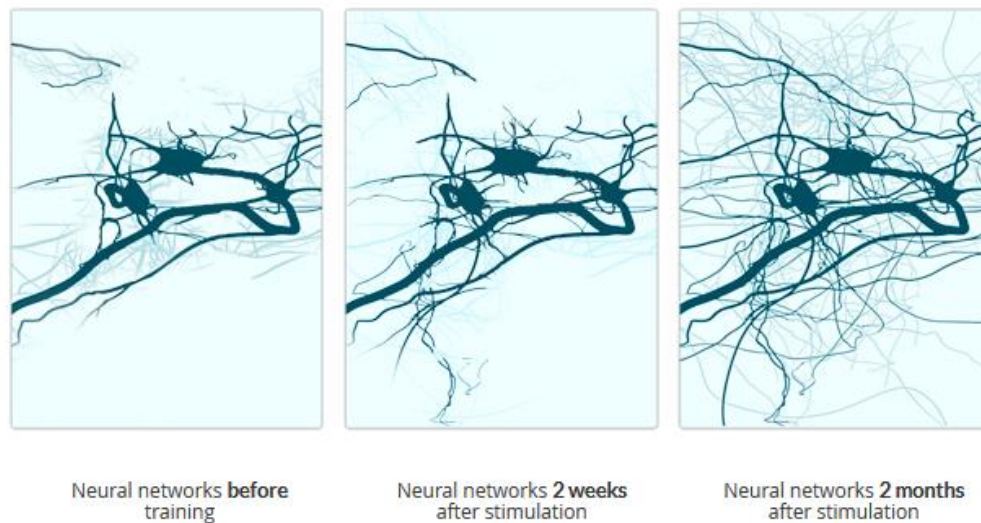
If we talk about Allah's specific creation, namely the brain, then we must know more about the anatomy and physiology of the brain itself. A term states that understanding how the brain works are the main way to uncover the very essence of human beings. Character (morals or behavior) is the most important thing that every human being must own, and we must observe and analyze that the brain is the center of human character. 2 Albert Einstein said that there are 2 (two) things that will not be completely discussed and observed, the first is the universe and the second is the human brain. This reveals that if we study the brain, we are prepared to exhaust our brains to unravel its mysteries.

## 2. DISCUSSION

We begin to surf into the human brain by discussing the smallest components of the brain, namely the nerve cell. The brain is part of the composition of the central nervous system that works as a center for controlling human activities in the form of thinking, moving, behaving, feeling something, remembering, and so on. Without the brain, humans will not live, like inanimate objects, without any use and potential. Allah created the brain starting from the fetus (in the womb). The brain is formed in the uterus starting on the 14th day of the fertilization process and continues to proliferate until there are billions or trillions of brain nerve cells in the form of neuron cells and glial cells (support cells). 3 Since the first trimester, the stages of development continue to occur until complete in the third trimester. Explosions of rapid brain growth occur in infants aged three months to 1.5 years. 2 The brain that weighs only 2% of the bodyweight of the human body consists of billions of neurons, and glial cells have a very complex function and structure. 3 Neuron cells supported by their activity by supporting cells called glial cells, the number of which is 10: 1. 4

Each nerve cell has a connection through a connecting gap between nerve cells called a synapse. Synapses facilitate the transfer of information from one neuron to another. Each synapse has 2 (two) balanced activities (excitation and inhibition) mediated by neurotransmitter substances. 4 The regulation of this balance is beyond human control. Without the arrangement from Allah, surely humans will not be able to live. Each 100 billion nerve cells have 1000 synapse connections per nerve cell so that our brain is able to form

100 trillion synapses. Amazingly, if all the synaptic junctions were put together so that they resembled threads, then the entire length of the synapse could circle two and a half times the earth (imagine, the length of the circumference of the earth is 40,000 km). An important concept is that the more the brain nerves are stimulated with new information from the outside, continuous training from the brain, and environmental stimulation through the five senses, the more connections between synapses and the brain will be more active. As illustrated in the following image:

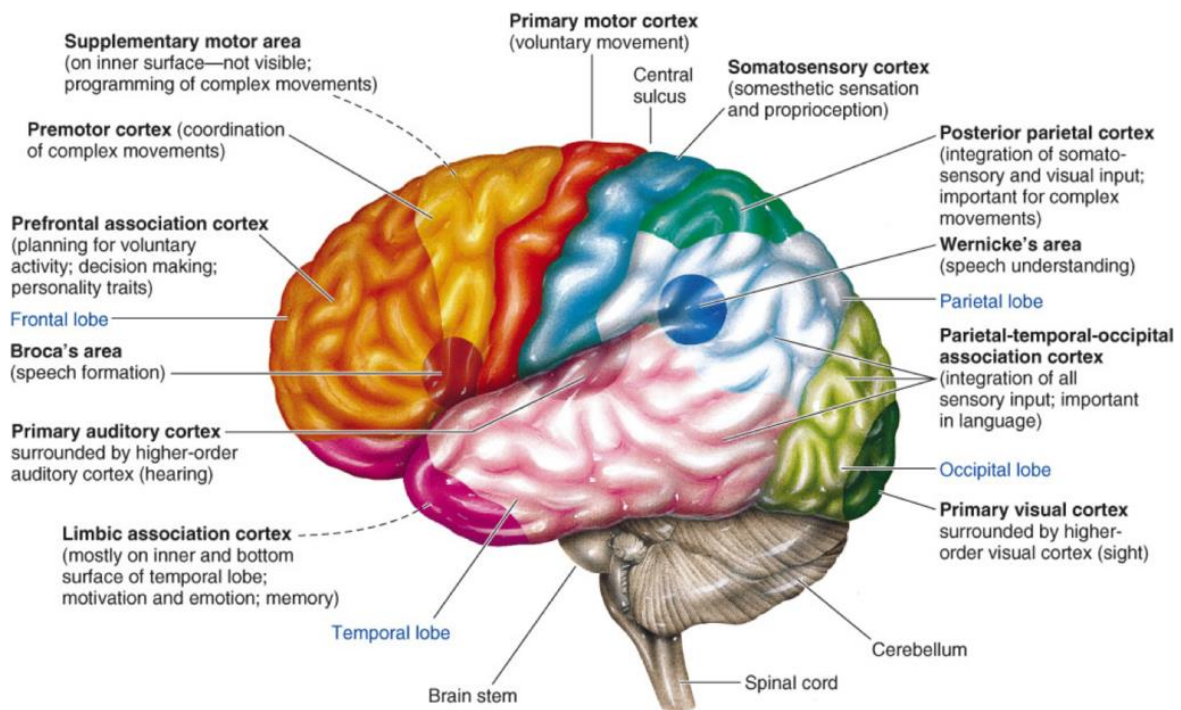


**Figure 1.** Illustration of a neural network before and after stimulation. Quoted from: <https://www.cognifit.com/brain-plasticity-and-cognition> . 5

Figure 1 illustrates the microscopic structure, the state of the neural network before and after being given a stimulus or stimulation for a certain period. Synapses (connectors between nerve cells) will be more and more formed ( synaptogenesis ) and will increase in number until the age of 20 and continue with age even though the process is not like young age. Therefore, in essence, we must always use this brain by stimulating it. The term " use it or lose it " means use your brain. Otherwise, it will be lost. Understanding this concept is very important because it can affect the activities of human life. During 24 hours, we live determined by the usability of the brain itself and its influence on the activities of human life. If humans have environmental conditions rich in stimuli, especially positive-value stimuli, it will naturally affect the brain itself, and the brain will also reciprocally affect human life itself.

In a book entitled "Ideal Brain" by a researcher from Japan and the United States, Toshinori Kato, MD, Ph.D., who studied nearly 10,000 human brains using MRI ( Magnetic resonance imaging ) technology, the brain is always trained, the brain function will develop. Physiologically, body functions will develop at the age of 10-20 years, then begin to stagnate when they reach the age of 30-40 years. We have always believed that the brain undergoes

a similar pattern. There are still many parts of the brain that are not fully active and developing. There, many brain cells are waiting to absorb information and experiences. If the right stimulus or stimulus is given to that part, brain function can still be improved. We can give many stimuli from the outside/environment to our brain, and the right stimulus is to interact with the Qur'an. Let us talk about interactions with the Qur'an that humans do, such as reading, memorizing, listening, meditating, or contemplating the meaning of the Qur'an. This will affect the function directly or indirectly. Even the structure and function of the brain itself, microscopically cellular, can be affected. Masha Allah, this is the miracle of the Qur'an that Allah has given to His servants. We know that the human brain consists of several lobes (sections), namely the Frontal, Temporal, Parietal and Occipital lobes. Each outermost part of each lobe, called an area of the cerebral cortex, has a distinct and complex functional character and interacts with other areas of the cortex of the lobe. (Figure 2)

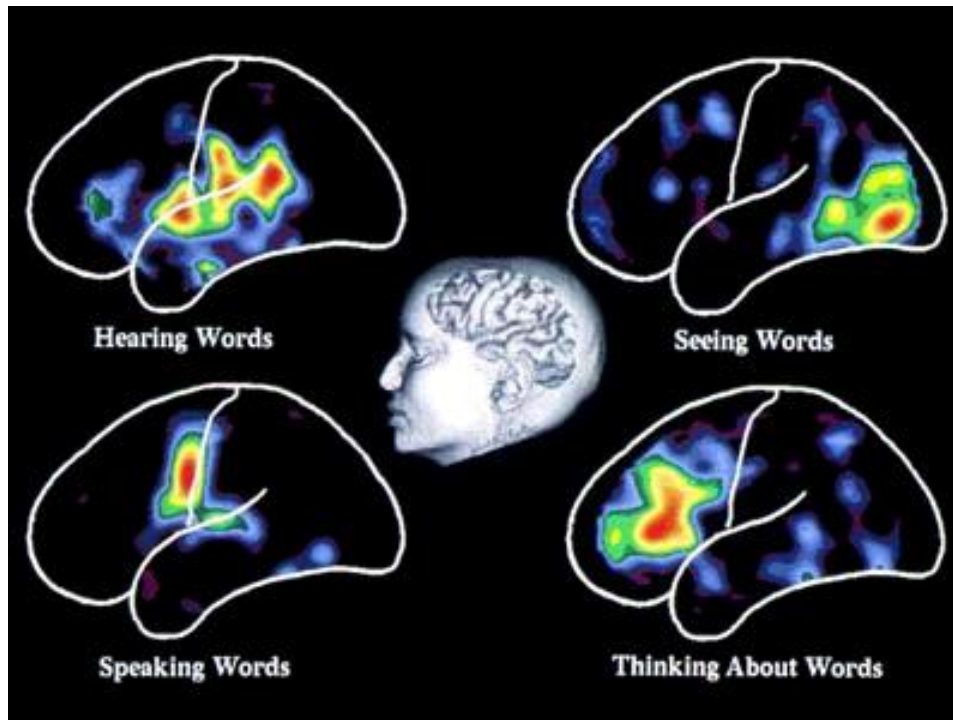


(a) Regions of the cerebral cortex responsible for various functions

**Figure 2. Illustration of each area of the brain cortex according to the lobe that has its function. Quoted from: <https://quizlet.com/233531216/cerebral-cortex-function-areas-pt1-diagram/> 7**

Figure 3 illustrates through a positron emission tomography (PET) scan that each area of the cortex in the brain has its influence on different stimuli, such as when a person speaks, hears, thinks, sees, memorizes, and has a role in activity in each different brain area and integrate. Logically, all areas of the brain will be activated if we use the different stimuli through interaction with the Qur'an. The stronger and more routine our activities, the more our brains will always be decorated with the best stimulus, namely the Quran (Kalam Allah ).





**Figure 3. Illustration of the brain cortex area scanned with a positron emission tomography tool. Quoted from: <https://edu.glogster.com/glog/summer-project-on-alzheimers/27sr32cxj4s>**

This interaction with the Qur'an is closely related to one's thought process, especially when listening, reading, memorizing, and contemplating the meaning of the Qur'an. Thinking is one effective way to sharpen the brain. Thinking does not need to be grandiose because the brain only takes a moment to think, as long as it is done regularly (*istiqomah*). Thinking is the best way to hone and train our brain work. Lack of thinking will make the brain shrink and eventually not function optimally. Do not get used to our brain being trapped, too lazy to think. Lazy thinking must be distinguished from simple thinking. People who are lazy to think are ignorant, while people who think simply are still trying to think. Their abilities limit that. Lazy thinking is a disease. People who never think will never know the purpose of creation. All he knows is how to sustain life in the world.<sup>8</sup> A person interacts with the Qur'an by using his thoughts which are arranged in the brain. Diligent reading, listening to the Qur'an, and meditating or contemplating the contents of the Qur'an makes the brain accustomed to thinking and stimulated so that the brain will be more active and creative. This is strengthened if we endeavor to involve the analysis and motor aspects of the brain to practice the contents of the Qur'an, whose effect will be more potent in stimulating our entire brain. The health of a brain depends on the extent of interaction with the Qur'an. Health is

achieved not only physically, but psychological, social, and spiritual aspects will be better formed, affecting our body's entire health system.

Many studies have been conducted to prove how the effects of the Qur'an from listening, reading, and memorizing the Qur'an to brain function. Especially in terms of brain waves and mental health. The Qur'an is not a book that must be scientifically proven or must follow science because it is scientifically created by humans whose truth is relative. However, the Qur'an is sufficiently believed in faith as guidance of Allah. The available scientific evidence can be part of the stimulus for our belief in the truth of the Qur'an. Dr. Zakir Naik, an expert on medical personnel who is also an expert on comparative religion, said that 80% of the contents of the Qur'an had been scientifically proven starting from the process of human events and astronomy. And the remaining 20% is ambiguous due to the limitations of human reason itself to prove it. And someday it will be scientifically proven too.

Listening to murottal Al-Qur'an is able to stimulate the growth of brain functions (memory function, learning, language, listening, speaking analytically, and the function of consciousness) and stimulate the function and growth of memory storage which is increasingly developing. So the memory is getting bigger. 8 Research in Malaysia in 2012 by Zulkurnaini et al. regarding the comparison of the effects of listening to the Koran and music on brain waves concluded that alpha type brain waves are more accessible to the brain when listening to the Koran than listening to classical music, so that these waves will indirectly affect relaxation conditions. The brain and body will produce psychic calm, relax the body and facilitate the stimulation of memory function. 9 Even research in Iran by Salahshoura et al in 2018 examined as many as 66 patients with deep loss of consciousness (coma) who were treated in the Intensive Care Unit (ICU). The intervention by listening to murottal Al-Qur'an for ten days was able to improve the level of consciousness of comatose patients as measured by the Glasgow coma scale. This turned out to be an easy and practical way to provide spiritual care to patients. 10

Research by Ifati et al in 2019 published in the journal *Neurona* regarding the effect of murottal al-quran on the outcome of ischemic stroke patients, it turns out that the intervention of listening to murottal al-quran was carried out for 7 days by listening to murottal al-Qur'an Juz 'Amma through headphones 2 times a day, 30 minutes duration at 06.00 and 16.00. From the results of this study, it turned out that listening to murottal Al-Qur'an significantly improved anxiety symptoms, improving clinical outcomes by 9.025 times compared to controls in acute ischemic stroke, so it can be considered to support the recovery of stroke patients. It turns out that reading the Qur'an has a high spirituality and religiosity value and provides a calming effect in addition to a beautiful and regular tone, so it can be used for healing various diseases, and reading the Qur'an can be used as a spiritual relaxation technique so that the effect of improving mental health is obtained. . 11

Memorization activities are also activities that train brain function, especially the hippocampus. A significant part of managing human memory stores. If this part is damaged or atrophied, it will cause memory impairment. Therefore, memorizing activities become a stimulus to activate neurons in the brain so that neuron cells become more active and

synapses are formed. There are neuron cells that have myelin, especially in the cerebral cortex. Myelin is the covering of nerve cells consisting of fatty tissue. Myelin plays a role in increasing the speed of conduction of action potentials (nerve electricity) so that nerve activity can run properly. In neuroscience, the myelin cells are thicker in people who always practice their memorization because they are always stimulated. Furthermore, keep in mind that the process of myelin formation occurs mid-fetal life until the age of 20 years. Therefore, the memorization process is faster and will be easily attached, especially in children and adolescents. The myelination process (myelin formation) will continue throughout life, but this process decreases with age.

Regarding the effect of memorizing the Koran on Health, quite a lot of research has been done. Research by Farhadi in 2012 shows that memorizing the Quran can improve one's mental health and become a practical resource in overcoming the stresses and challenges of this century. Mental Health is an essential component that significantly affects a person's health, including physical. Professor Muzakkir in his book entitled *Sufism and Health*, says that believers believe that the Qur'an functions as a hudan (guidance, syifa (medicine), and mercy. If the Qur'an is used and applied correctly, it will surely get results that make the world happy and Hereafter in the form of peace, health, safety, and blessings

Health effects can be obtained very much before we interact with the Qur'an. If we analyze simply the stages of a person's activity before interacting with the Qur'an also indirectly has a positive impact on the body. Rasulullah taught us as his ummah to pay attention to etiquette or ethics when reading and listening to the Qur'an. Mustamir, in his book entitled *Healing and Healthy with Miracles of the Qur'an*, makes a detailed discussion of the benefits of charity and health. He wrote that when someone practices the adab sunnah of the Prophet before and while reading and listening to the Qur'an, such as performing ablution, praying and dhikr, reading with beautiful tartil, listening seriously, and deep listening, then the stages of the activity already have a tremendous effect on skin health, mucosal tract, body relaxation, brain waves and so on. So, we, as humans who are the result of the design of Allah's creation, should continue to interact with the Qur'an even when we are happy, sad, upset, happy intensively, and whatever our circumstances. Especially in the current era of the COVID-19 pandemic, many negative impacts affect a person's health, especially in the mental aspect. Economic factors in the family have decreased drastically due to the pandemic's effects. Excessive anxiety and panic factors have caused different stressors on our mental and physical aspects, indirectly leading to decreased productivity, thinking power, and immunity. Therefore, interaction with the Al-Quran is an important part of our lives that can completely affect our own health according to the definition of health itself based on Law No. 36 of 2009 concerning Health: Health is a healthy state both physically and psychologically, social and spiritual so that a person's life will be more productive. Any age does not influence the virtue of the Qur'an until the end of time is approaching because it is the pure word of Allah for all time. God willing, the Qur'an will be the antidote for all of us.

لِ الْقُرْآنِ اءِ لِلْمُؤْمِنِينَ

Meaning: "And We send down from the Qur'an something that is an antidote and a mercy for those who believe." (Surat al-Israa: 82) 1

Let us strengthen our interaction relationship with the word of Allah, which is very significant, namely the Al-Qu'ran. God willing, Allah will change our lives for the better.

### 3. CONCLUSION

Health effects can be obtained very much before we interact with the Qur'an. If we analyze simply the stages of a person's activity before interacting with the Qur'an also indirectly has a positive impact on the body.

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