

# THE PHENOMENON OF HUMAN BRAIN AS SLEEP IN THE AL-QUR'AN AND NEUROSCIENCE PERSPECTIVE

## A RESEARCH

Submitted to Faculty of Ushuluddin In Partial Fulfillment of the Requirements to  
Gain the Religious Degree (S.Ag) in Qur'an and Exegesis Sciences Department



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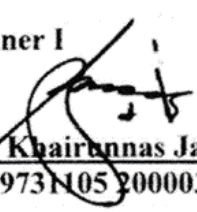
  
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*Wassalamu 'alaikum Wr. Wb.*

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## FOREWORD

Praise and gratitude pray for presence of Allah SWT, for the grace and His gift ever bestowed upon us all. Sholawat and greetings are hopefully given to the prophet Muhammad SAW that had been in communicating the message and the Shari'a of Islam to all mankind. For the grace of Allah, the author finally able to complete the thesis entitled "The Phenomenon of Human Brain as Sleep in al-Qur'an and Neuroscience Perspective".

This research is a requirement for achieving a Bachelor of Religion of Islam at the Faculty of Ushuluddin, State Islamic University of Sultan Syarif Kasim Riau. Thanks to the confidence and support from some people morally and materially, the author finally faced and overcome the difficulties and obstacles well, so the research could be completed. On this occasion, the author would like to express gratitude to a few parties where the assistance, guidance, and encouragement so that I can finish, namely to:

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7. Kartika, S.Ag., MA the lovely mother who gave birth, and keep praying for the author so that the author does not despair in completing this research.
8. Raden Abdul Khalis, the respectful father who has to raise, feed and provide valuable lessons until the author could boast does this research.
9. Raden Muhammad Ridha, My sibling who always give supports in completing this research.
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13. All parties who could not be mentioned one by one by the author that has involved a lot of helps so that this research could be completed.

Hopefully, this paper can be useful and provide guidance to the students who will carry out the research as well as to the various parties that needed.

Regards,

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## ABSTRACT

### THE PHENOMENON OF HUMAN BRAIN AS SLEEP IN AL-QUR'AN AND NEUROSCIENCE PERSPECTIVE

By: Raden Kurnia Kholiska

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The research was entitled “The Phenomenon of Human Brain as Sleep in Al-Qur’an and Neuroscience Perspective”, aimed at knowing a verse in Quran that discusses the workings of the human brain as sleep and analyses in neuroscience. In Surah al-Kahfi verses 18, where the story of a young man who slept for hundreds of years inside a cave explained by the scientific interpretation that is *Mafatihul Ghaib* Interpretation and *al Jawahir fi Tafsir Al Qur’an Al Karim* that the brain phenomenon remains active and works while human sleep. The phenomena that have succeeded in producing new inventions have led to thought, analyze and find a match between the Quran and the scientific discovery. This type of research is library research. Data collection is done by quoting, and analyzing representational and relevant literacy issues of the human brain as sleep in an interpretation perspective of Quran and neuroscience. As for the method used in revealing the workings of the human brain as sleep in the use of a comparative method between Quran and neuroscience. The conclusion of the study is the use of the word sleep in Quran is very much. Like *naum*, *nu’as*, *hojoo’*, and *ruqud*. Yet has a different meaning in every word. *Ruqud* which means sleep. (which has not human habits). Long sleep like that in the story of *Asbabul Kahfi* verses 18 says *aiqazhan wa hum ruqud*. *Aiqazhan* word in translation means wake up. But in the interpretation says it’s like being awakened. Whereas the analysis in neuroscience says *aiqazhan* as if awake is due to rapid eye movement (REM)

**Key words: Surah al-Kahfi verses 18, Sleep and REM**

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## المخلص

ظاهرة عمل دماغ البشر أثناء النوم من خلال القرآن الكريم و علم الأعصاب (Neurosains)

الكاتبة : راضين كورنيا خالسكا

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هدف هذا البحث العلمي الذي تحت عنوان "ظاهرة عمل دماغ البشر عند النوم من خلال القرآن الكريم وعلم الأعصاب (Neurosains) هو معرفة الآيات القرآنية التي تبحث عن عمل دماغ البشر عند النوم وتحليله من خلال علم الأعصاب. أخبرت الآية 18 من سورة الكهف عن الشباب الذين يرقدون مئات سنين في الكهف. قد فسرت كتب التفاسير العلمية و هي تفسير مفاتيح الغيب و تفسير الجواهر في تفسير القرآن الكريم هذه الآية بأن دماغ البشر يبقى مشغولا و يعمل أثناء النوم. هذه الظاهرة نجحت في إنتاج اكتشاف جديد و تدعو الباحثة إلى التفكير والتحليل وإيجاد التوافق بين القرآن و الاكتشافات العلمية. نوع هذا البحث هو البحث المكتبي. حيث تم جمع البيانات عن طريق اقتباس وتحليل المؤلفات المناسبة لهذا البحث و ذات الصلة بعمل دماغ البشر عند النوم من خلال القرآن الكريم و علم الأعصاب. أما الطريقة التي استخدمت الباحثة لكشف عمل دماغ البشر أثناء النوم هي المقارنة بين القرآن الكريم وعلم الأعصاب. و الخلاصة من هذا البحث هي أن القرآن الكريم استخدم عبارات كثيرة عن النوم مثل النوم و المهجوع و النعاس والرقود. و لكن لكل كلمة منها لها معنى يخالف كلمة أخرى. فالرقود هو نوم طويل جدا الذي يخالف الطبيعة الإنسانية كما ورد ذكره في الآية أيقاظا و هم رقاد في الآية 18 من سورة الكهف. وكلمة أيقاظا تعني الاستيقاظ كما في الترجمة الإندونيسية, لكن التفسير يقول كأنه في حالة اليقظة. في حين حلل علم الأعصاب بأن كلمة أيقاظا تعني كأنه الاستيقاظ لأنه حدثت حركة العين بسرعة (REM).

الكلمات المفتاحية: الآية 18 من سورة الكهف ، النوم ، REM.

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## ABSTRAK

### FENOMENA KERJA OTAK MANUSIA KETIKA TIDUR DALAM PERSPEKTIF AL-QUR'AN DAN NEUROSAINS

Oleh: Raden Kurnia Kholiska  
NIM: 11632200522

Skripsi ini berjudul “Fenomena Kerja Otak Manusia Ketika Tidur dalam Pandangan Al-Qur'an dan Neurosains, bertujuan untuk mengetahui ayat dalam al-Qur'an yang membahas kerja otak manusia saat tidur serta menganalisisnya dalam ilmu saraf (neurosains). Dalam Surah Al-Kahfi ayat 18 yang berkisah pemuda yang tertidur beratus tahun didalam goa dan dijelaskan dalam penafsiran yang bercorak ilmiah yaitu tafsir Mafatihul Ghaib dan al Jawahir fi Tafsir al-Qur'an al Karim bahwasanya fenomena otak tetap aktif dan bekerja ketika manusia sedang tidur. Fenomena yang telah berhasil menghasilkan penemuan terbaru mengajak penulis berpikir, menganalisa serta menemukan kecocokan antara Al-Quran dan penemuan sains. Jenis penelitian ini adalah Library Research (Kepustakaan). Pengumpulan data dilakukan dengan mengutip, dan menganalisis literatur-literatur yang representatif dan relevan dengan masalah kerja otak manusia ketika tidur dalam perspektif tafsiran al-Qur'an, dan neurosains. Adapun metode yang digunakan dalam mengungkapkan kerja otak manusia saat tidur adalah menggunakan metode perbandingan antara al-Qur'an dan Neurosains. Kesimpulan dari kajian ini adalah penggunaan kata tidur di dalam al-Qur'an sangat banyak. Seperti *naum*, *hojoo'*, *nu'as*, dan *ruqud*. Namun memiliki arti yang berbeda dalam setiap kata. *Ruqud* yang berarti tidur (yang tidak lazim dilakukan). Tidur yang sangat lama seperti yang terdapat dalam kisah ashabul kahfi ayat 18 kata *aiqazhan wa hum ruqud*. Kata *aiqazhan* dalam terjemahan artinya bangun. Namun dalam penafsiran mengatakan seperti sedang terbangun. Sedangkan analisis dalam ilmu neurosains kata *aiqazhan* seperti terbangun adalah karena sedang mengalami Gerak Mata Cepat (REM).

**Kata kunci : Surah Al-Kahfi ayat 18, Tidur, REM.**

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# CHAPTER I

## INTRODUCTION

### A. Background of the Research

Every human, every day through two conditions, sleep and wakefulness. Sleep and wakefulness are two completely different conditions. Some philosophers say that people who sleep are completely different from people who are awake. Awake people are connected to this world. The sleeper looks like a dead person, only when his heart beats his lungs breathe, changing positions from one side to the other.

However, did not feel what was around him, even he did not feel the dimension of the time he was in and the dimension that was simply walking around him. The time when he is biological time. While the time that runs nearby is geographical time.<sup>1</sup> The humans do activities that can drain energy and mind everyday. The activities carried out can cause the body to become tired. One way to optimize the work of the body is to get enough rest.<sup>2</sup> Islamic is a universal religion that provides demands on each side of the life of its adherents ranging from simple things like sleep to more complex things. QS. An Naba: 9 said,

وَجَعَلْنَا نَوْمَكُمْ سُبَاتًا

*Meaning : And made your sleep (a means for) rest*

The above verse explains that, one of the signs of Allah greatness in humans is sleep to rest the body or to release fatigue.<sup>3</sup> Sleep is one of the habit of humans. Allah makes it as one sign of His greatness. In addition, sleep is time to

<sup>1</sup> Ahmad Syauqi, *Kitab Rahasia Tidur Menurut al-Quran, Sunah Nabi, dan Sains Modern*.(Jakarta Selatan: Tuross,2018), p. 26.

<sup>2</sup> Nor Kholish Reefani, *Pola Hidup dan Tidur Sehat Ala Rasulullah saw*.(Jakarta: PT Elex Media Komputindo, 2014), p.44.

<sup>3</sup> Aqila Selma Amalia, *Tips Hidup Sehat dan Berkah Ala Rasulullah*.(edition 1; Yogyakarta: Abata Press, 2015), p. 25.

take a rest for the brain and the heart then it can again to activity well. The real of sleep can be seen from the spiritual or scientific.

From the spiritual side sleep can be spirituality media as previous stories in the al-Qur'an which described that sleep can be a spirituality journey media. In fact, sleep can be used to protect and paralyze the enemy. And the scientific side, al-Qur'an also gave information that sleep can be used to save the rate of body metabolism and accelerate the healing process of disease.<sup>4</sup> QS. Ar-Rum: 23

وَمِنْ آيَاتِهِ مَنَامُكُمْ بِاللَّيْلِ وَالنَّهَارِ وَابْتِعَاؤُكُمْ مِنْ فَضْلِهِ إِنَّ فِي ذَلِكَ لَآيَاتٍ لِّعَوْمٍ يَسْمَعُونَ

*Meaning : And of His signs is your sleep by night and day and your seeking of His bounty. Indeed in that are signs for a people who listen.*

The conclusion from the above verses that there is a sign of the power of Allah and his gift that is really interesting if you notice with all the advancements in science in the modern era, no one really knows why we sleep.

According to Dr. Andrew Meil, a pioneer of integrative medicine, wrote in an article in 2015 about the power of sleep, that "our brains are very busy during our sleep, experiencing cycles through a variety of strong nervous responses every night. Whether this activity is a kind of homework ladder in the brain to maintain optimal function. Maybe the rhythm of sleep and wakefulness every day will always be a mystery: something experienced but never understood before."<sup>5</sup>

The brain is an organ of the human body which becomes the nerve center.<sup>6</sup> Become home to human thought.<sup>7</sup> Its size is roughly the same as grapes and cabbage weight. It contains about 100 billion neurons or nerve cells, and may get bigger if there are connections between cells it thus exceeds the number of atoms

<sup>4</sup> Nadirsyah Hosen, Nurussyariah hammado, *Ashabul Kahf Melek 3 Abad.*(Jakarta:PT Mizan Pustaka,2013), p. 37.

<sup>5</sup> Mohammed Faris, *Muslim Produktif.*(Jakarta:PT Elex Media Komputindo, 2017).

<sup>6</sup> Dendy Sugono, dkk, *Kamus Bahasa Indonesia.*(Jakarta: Pusat Bahasa Departemen Pendidikan Nasional , 2018), p.1024

<sup>7</sup> Lyn Wilcox, *Psikologi Kepribadian Analisis Seluk-Beluk Kepribadian Manusia.*(Yogyakarta:IRCiSoD, Februari 2013), p.74

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in the world.<sup>8</sup> Even though it only makes up 2% of the body weight, brain uses 20% oxygen.<sup>9</sup>

In the human brain there are brain waves. Based on measurements using a measuring instrument called the EGG (Electro Encephalograph) we recognize there are four types of brain waves. *Beta, Alpha, Theta, and Delta*. Measurement of brain waves is based on vibrations produced by our brain in one second. We can't be in two different brain waves at once. Each of these waves explains the different operating conditions of the brain.

*Beta wave* are in the range of 12-25 Hz. We are in this condition when we are aware, doing daily activities, doing activities require high concentration, debating, exercising or doing complicated projects. *Alpha waves* are in the range of 8-12 Hz. The *Alpha* condition occurs when we are relaxed but alert. For example reading, seeing, and thinking of solutions for a problem.

*Theta waves* are in the range of 4-8 Hz. When we are in a very relaxed state. Enter meditative conditions and creative ideas emerge. And if we can't control ourselves, we will go into the *Delta* state of sleep. *Delta* Frequency waves are in the range of 0,5-4 Hz. This condition is a dreamless sleep condition and we become "unconscious" about our surroundings.<sup>10</sup>

German scientists were also interested in examining the phenomenon of sleep. They try to draw conclusions from the experiments they do. They sat, changes in his brain affect creativity and ability development in a process called slow waves, when a person sleep deeply during the first four hours of the sleep cycle. German research also explains, the memory that will disappear along with increasing age is associated with disturbance and lack of sleep conditions, especially deep sleep which is very necessary for the process of honing memory.

<sup>8</sup>Ibid

<sup>9</sup>Roberth Ornstein & Richard F. Thompshon, *The Amazing Brain*. (Boston: Houghton Mifflin, 1984), p.37.

<sup>10</sup>Adi W. Gunawan, *Born to be a Genius*.(Jakarta: PT Gramedia Pustaka Utama, 2003), p 32.

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Researchers from the University of Chicago stressed there are a number of facts that people forget when they pass through a busy day may recall what they did when they slept in good condition. The researchers asked volunteers to remember simple words, and found in a lot of memory, they failed to store the information of those words in the afternoon. But he next day they were able to sleep well and were able to recall the information they had remember very well.

This means the brain is able to store memories are almost forgotten through the night and when it is needed from the brain to remember something that was originally remembered in an unstable condition, which means it has been forgotten by the person concerned, then at a certain stage, the brain puts back that information more stable and efficient.

But researchers believe it is possible to return to memory instability becomes even more stable when needed. This means that memories can be modified when dealing with new experiences. The problem might surprise people.

God mentions Qs. Adz Dzariyat: 21

وَفِي أَنْفُسِكُمْ أَفَلَا تُبْصِرُونَ

*Meaning : And in yourselves. Then will you not see ?*

Professor Michael Stryker of the University of California said, "If a student repeats his studies well until he is tired and then sleeps, the brain will continue to work while sleeping in the same way". Here we remember he great verse of Allah, which reminds us of this since the days of no human being on earth to know the importance and wonders of sleep.

Qs. Furqon: 47

وَهُوَ الَّذِي جَعَلَ لَكُمُ اللَّيْلَ لِيَسَآءَ وَالنَّوْمَ سُبَاتًا وَجَعَلَ النَّهَارَ نُشُورًا

*Meaning: And it is He who has made the night for you as clothing and sleep (a means for) rest and has made the day a resurrection.*

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This verse was revealed in an age when no one was researching sleep, and most people assume that sleep is just a useless habit. But, only the al-Qur'an has talked about this, by making sleep a miracle and a proof Allah's power.

As we know, when we sleep the soul left the body. The sleeper are related with the universe, while those are awake related with the earthly life of concrete. The sleeper like the dead, but his heart was still throbbing and his lungs still breathing. Then, Allah keep soul and decide the body, either for interim or forever. The people sleep often moved change the position, although not feeling what's going on around him.<sup>11</sup>

Sleep is a biological phenomenon that occurs in humans, as happen in other creatures. Rest and sleep is different. The peole was move or stationary is not similar with sleep. The people was sleep often moving, even unconsciously to rise up from his bed, the running at home and doing some activity, then back to his bed. After waking up, do not remember what happened during sleep. In medical terms, this event called "sleepwalking".<sup>12</sup>

Sleep is take to rest the body from the tired and to restore the vitality of body for other activities. Thus, the sleep give benefit for people. Sleep can maintain the status of the health at the optimal level. In addition, the process of sleep can fix a variety of cells in the body.<sup>13</sup>

Adequate rest takes time for the brain to operate optimally. When thinking, we must use neo cortex. When tired and tense, the active brain. During sleep, REM (Rapid Eye Movement) will occur. At this time all the information that has been learned for one day will be arranged in our brain and memory. This information will be taken from short-term memory and transferred to long-term

<sup>11</sup> Nuris Shobaha, *The Story of Sleeping of Ashabul Kahf in the Qur'an*, Thesis, Semarang: UIN Wasisongo, 2018, p. 6.

<sup>12</sup> Diana Diahwati, *Serba Serbi Manfaat dan Gangguan Tidur*. (Bandung: Pionir Jaya, 2011), p. 84

<sup>13</sup> Ibid., p. 7.

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memory. On average babies or young children have REM 15%-60% in their sleep time. Where as adults are only around 20%.<sup>14</sup>

Islam has an interest in discussing the theory of sleep. In Islam we know of two sources are used as guidelines for life, namely the al-Qur'an and Sunnah. In the al-Qur'an the discussion about sleep was mentioned several times. Likewise in as-sunnah, there are also some hadits that explain about sleep.

وَتَحْسَبُهُمْ أَيْقَاظًا وَهُمْ رُقُودٌ وَنُقَلِّبُهُمْ ذَاتَ الْيَمِينِ وَذَاتَ الشَّمَالِ وَكَلْبُهُمْ بَاسِطٌ ذِرَاعَيْهِ بِالْوَصِيدِ لَوِ  
اطَّلَعْتَ عَلَيْهِمْ لَوَلَّيْتَهُمْ مِنْهُمْ فِرَارًا وَكَلِمَاتٍ مِنْهُمْ رُعبًا

*Meaning : "And you would think them awake, while they were asleep. And we turned them to right and to left, while their dog stretched his forelegs at the entrance. If you had looked at them, you would have turned from them in flight and been filled by them with terror." Qs. Al-Kahfi : 18*

In the interpretation of the Quraish Shihab, they say that they are like people who are not sleeping and are fully conscious, even though they are all sleeping soundly, and we are turn their bodies to the right and left to keep the wind and the sun always concerning their whole body so the body is not damaged by influence soil.<sup>15</sup>

So, the al-Qur'an and Science are inseparable and the relationship between two is highly balanced. Scientists have said the phenomena of sleep is a miracle deserves to be analysed and studied in depth, as it is a complex phenomena. Glory and Praise to be Allah Almighty has decreed in the al-Qur'an of the importance of sleep in the day and night, and sleep is one of the sign of Allah's Almighty power and is a miracle to be studied by each individual. Islam places great importance on taking care of one's body and sleep is one need that has to be fulfilled.

<sup>14</sup> Opcit. Adi W.Gunawan, p. 37

<sup>15</sup> M. Quraish Shihab, *Tafsir Al-Mishbah, Pesan dan Keresasian Al-Quran*, p. 259

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Scientists have stressed that sleep is needed to rest the brain, improve memory, and increase one's energy. This shows Islam places great importance on having productivity and alertness in each individual's deed. Many scientific facts had been clearly stated in a fundamental manner in the al-Qur'an could only be analysed with the advanced technology of the 20th century. These facts were not known when they were first revealed and are proof the al-Quran is the book of Allah Almighty. The view of Islam on the sleep phenomenon is in line with and is according to the findings of contemporary science.<sup>16</sup>

Based on the background has been outlined above, the authors are interested in lifting a discussion under title, **“The Phenomenon of Human Brain as Sleep in Al-Qur'an and Neuroscience Perspective”**.

## B. Explanation of Terms

- Phenomenon : Phenomena are things that can be witnessed with the senses and can be explained and evaluated scientifically.<sup>17</sup>
- Brain : The most complex organ of the body, and arguably the most complex organ of the body, and arguably the most complex thing on earth.<sup>18</sup>
- Sleep : An active period in which a lot of important processing, restoration, and strengthening occurs.<sup>19</sup>
- Al-Qur'an : The word of Allah (kalamu Allah) as revealed to his prophet Mohammad, transferred to us through narration chains known as “Tawator” on seven ahruf, written between the covers of Holly Book, protected by Allah

<sup>16</sup> Farahwahida Mohd Yusuf, 2014, *Sleep Phenomena from the Perspective of Islam and Science*. Journal Technology. Vol.1 No.67, Februari 2014. p. 110.

<sup>17</sup> Noname, *Pengertian Menurut Para Ahli*. (<https://pengertianmenurutparaahli.net> accessed to 14 January 2020).

<sup>18</sup> Noname, *Neuroscience: The Science of The Brain*, (British Neuroscience Association: Liverpool), p.1.

<sup>19</sup> SleepFoundation.org, *Why Do We Need Sleep*. (<https://sleepfoundation.org> accessed to 29 November 2019)

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between the lones, recited as a form of worship, miraculous in its words and meanings, and challenging with its shortest Sura.<sup>20</sup>

Neuroscience : Ultimate science.<sup>21</sup>

### C. Identify The Problems

Based on the background above, the writer identifies several problems will be used as further research material :

Interpretation of human brain as sleep is one scientific fact has been clearly stated in a fundamental way in the al-Qur'an can only be analyzed with sophisticated technology of the 20th century. Therefore, it is necessary to examine what the verses contained in the al-Qura'n explained about the human brain as sleep.

The interpretation of the al-Qur'an verses about the human brain as sleep is *ijaz ilmi*, here will be discussed whether *qauliyah* and *qauniyah* synchronize with one another in accordance with the topics discussed.

To explore this problem issue, a research needs to be carried out in accordance with the views of commentators and scientists. Fakhruddin Ar Razi in *Mafatihul Ghaib* interpretation, Tanthawi Jauhari in *al Jawahir fi at Tafsir al Quran al Karim* interpretation. And muslim science figures such as Prof. Dr. Ahmad Syauqi in the book *Kitab Rahasia Tidur*, Dr. Jamal Elzaky in the book *Buku Induk Mukjizat Kesehatan Ibadah*.

### D. Scope of Research

Many verses talking about sleep. Both in terms of sleep patterns, health and medicine. In the al-Qur'an, the word sleep is mentioned with meanings of *An-Naum*, *Ar-Ruqud*, and *An-Nu'as*, *Subaat*, *Hojoo'*. The word *An-Naum* in al-Qur'an repeated 9 verses, *An-Nu'as* repeated 2 verses, *Subaat* a verses, *Hojoo'*

<sup>20</sup> Global Reciter, *Definition of Quran*. (<https://quran.bh/en/holy-quran/definition-of-quran> accessed to 26 Juny 2020).

<sup>21</sup> Taruna Ikrar, *Ilmu Neurosains Modern*, (Yogyakarta: Turos, November 2015), p.2.

repeated a verses, and *Ar-Ruqud* repeated 2 verses in Surah al-Kahf verses 18 and Surah Yasin verses 52.<sup>22</sup>

And in research the writer chooses Surah Al-Kahfi verses 18 because its interpretation discusses the work of human brain as sleep. One of the interpretations used as a reference is *Mafatihul Ghaib* interpretation by Fakhruddin Ar Razi and *al Jawahir fi at Tafsir al Qur'an al Karim* by Thantawi Jauhari because the interpretation style is scientific interpretation that fits the discussion of this research.

#### E. Research Questions

Based on the background above, then the researcher consider to formulate of the core issues that will be focus on the deliberations, they are:

1. How the phenomenon of human brain as sleep in the al-Qur'an ?
2. How the analysis the phenomenon of human brain as sleep in neuroscience perspective?

#### F. Aim and Significance of Research

As for the aim of this study is :

1. To know the phenomenon of human brain as sleep in the al-Qur'an.
2. To analysis the phenomenon of human brain as sleep in the neuroscience perspective.

As for the significance of this research are :

1. Theoretically, this research gives an additional insight and information about “The Phenomenon of Human Brain As Sleep in a Qur'an and Neuroscience Perspective”.
2. Pratically, the results of this research are expected to show the scientific marvels contained in the al-Qur'an and was able to provide a stimulant for Muslims to develop science.
3. Theologically, the research is expected to add to our faith as Muslims.

<sup>22</sup> Muhammad Fu'ad Abd al-Baqi', Mu'jam al-Mufahras Li al-Fadz al-Qur'an, p.729.

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## G. Systematics of Writing

To get description of the research comprehensively, and to be able to get relation between one chapter and others, it needs very much to be explained in a systematical writing which is arranged as below:

Chapter I is discuss background of the research, explanation of terms, identify the problem, scope of the research, research question, aim and significance of research, and systematics of writing.

Chapter II is discuss the theoretical framework. In this theoretical framework will be discussed of the three keywords contained in the title. Namely Phenomenon, Brain and Sleep. Each sub chapter will be explained, such as the definition according to the view of the Mufasseer and Scientist. And explain about the previous research result.

Chapter III is scientific approach, types of research, data source, method of collecting data and data analysis.

Chapter IV analysis of some problems related to the view of Mufasseer and Scientist toward the human brain as sleep to answer the research question in this research.

Chapter V is closing that contains conclusion, suggestion in which explains the result of this study after employing scrupulous methods and meticulous analysis.

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## CHAPTER II

### THEORITICAL FRAMEWORK

#### A. Theoretical Basis

##### 1. Phenomena

The phenomenon comes from Greek; *phainomenon*, “what is seen”, phenomenon can also mean: a symptom, facts, events and things that can felt with the senses even mystical or occult things. Derived words adjective, phenomenal means: “something extraordinary”. Phenomenon occurs in all a place that can be observed by humans. An event is a phenomenon. Something things are phenomena, because they are things that can be seen. The existence of a object also creates a state or feeling, which is created because existence. Phenomenon is a series of events and forms circumstances that can be observed and valued through scientific glasses or through discipline certain science.<sup>23</sup>

According to the Big Indonesian dictionary Phenomena are things that can be witnessed with the senses and can be explained and evaluated scientifically. In the Big Indonesian dictionary also explained the equation of a phenomenon is a phenomenon means a thing or a state, an event unusual and noteworthy and sometimes indicates something will happen (Ministry of Education and Culture, 1990: 227).

The phenomena is something that can be witnessed by the five senses and can be assessed and explained scientifically. (Prof. Dr. Buchari Lapau, dr. MPH : 2012). Freddy Frangkuti: 2011 said, “A fact we encounter in the field”.

Natural phenomena such as solar eclipses and earthquakes that we have witnessed so far are facts and facts of events that occur in nature can be studied scientifically. Based on the facts of this natural event, scientists can study these natural phenomena so scientific knowledge is growing.

<sup>23</sup>Noname, *Tinjauan Pustaka*, (<https://digilib.unila.ac.id> accessed to 14 January 2020).

Research phenomena is a symptom or a thing arises can be a magnetic data (interest) to be examined. The definition of a research phenomena is everything has been given in the universe must be studied and discovered through scientific methods.<sup>24</sup>

## Brain

### 1.) Definition of Brain in Al-Quran Perspective

Intellect and brain a word that is very globalized in the community environment. The word that is often used in daily conversation. Most human equate the meaning of two words. Other distinguish the second meaning the word. Harun Nasution an Indonesian Muslim philosopher, states intellect and brain are different. Intellect in the sense of Islam is a thought power found in the human soul.<sup>25</sup>

The word “intellect” from Arabic *al-aql* or *aqala*. The word “intellect” itself was used by the Arabs before the existence of a religion. Common sense literally has the meaning of *al-imsak* (hold), *al-ribath* (bond), *al-hijr* (hold), *al-nahy* (forbid), and *man’u* (prevent). Intellect is also something that strong in receiving knowledge get the benefits of intellect. The word sense also shows the meaning of deep potential human self.

Discussing about intellect, a great thinker Imam Ghozali stated that intellect has no place. According to him, intellect is not well located inside and outside the human body.<sup>26</sup>

Whereas a pre-Islamic poet-robber, *al-Shanfara* as is quoted by Toshihiko Izutsu, has used the word intellect in his poetry:

“As long as someone uses his intelligence, nothing will happen which is shameful when he doesn’t know what to do, whether when he is did not

<sup>24</sup> Noname, *Pengertian Menurut Para Ahli*. (<https://pengertianmenurutparaahli.net> accessed to 14 Januari 2020).

<sup>25</sup> Harun Nasution, *Akal dan Wahyu dalam Islam*, (Jakarta: UI-Press, 1996), p. 13.

<sup>26</sup> Muhammad Yasir Nasution, *Manusia Menurut al-Ghazali*, (Jakarta: Rajawali Press, 1989), Quoted by Taufik Pasiak, *Revolusi IQ/EQ/SQ Menyingkap Rahasia Kecerdasan berdasarkan Al-Quran dan Neurosains Mutakhir*, (Bandung: PT Mizan Pustaka, 2008), p. 273.

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know what to do, whether he was on the road he was going to aiming, or hastily releasing himself from something he hates.<sup>27</sup>

Discussing about a human intelligence is not spared by bodily organs humans who store this intelligence. Especially if it's not the brain. Way the brain's work most known to the general public is thinking, and when think a human intelligence system will develop.

The human brain is the center of all intelligence possessed by humans. With the brain, humans can think, reflect, understand, and realize. Modern anatomical and physiological studies have determined zones certain in the brain. Among them there are motor zones, sensory zones, visual zones, auditor zones, and connecting zone.<sup>28</sup>

The motor zone is the entire movement parts of body. The sensory zone is the center of the sense of touch and several elements pain, and a feeling of changes in temperature and taste. The visual zone is the center of vision where the nerve pulses originating from the eyes end. The auditory zone is the auditory center where pulses the nerve from the ear ends. The connecting zone functions to distribute the messages and movements that arise to various parts of the body and involved high intellectual activity such as thinking, speaking, writing also reading. Based on the zones mentioned in anatomy and physiology modern thing is found in the al-Quran such as heraing function, sight, taste by tongue and skin.

It is evident modern scientists have invented memory puzzles and human recording in the brain. Dr. Wilded Penfiled, director of the institute neurology, and montreal, stated that he had found one tool recorder in a part of the brain. Discovery of Dr. Wilded Penfiled started when he was perform surgery on a woman. The woman had deep surgery conscious state. In the operation process, Dr. Wilded Penfiled touched on one of the

<sup>27</sup> Toshihiko Izutsu, *Relasi Tuhan dan Manusia: Pendekatan Semantik terhadap Tuhan*, (Yogyakarta: Tiara Wacana, 1997) p. 65.

<sup>28</sup> Mamluatul Hasanah, *Proses Manusia Berbahasa Perspektif Al-Quran dan Psikolinguistik*, (Malang: UIN Maliki Press, 2010), p. 114

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result is a woman with amnesia immediately recalled experiences from his childhood, even the patient feels it happening again. Operating process that is doctor performed showed that human activities would recorded in these brain cells. Dr. Wilded penfiled is a pioneering surgeon brain.<sup>29</sup>

Contained in the al-Quran regarding the brain. That zone explained in this al-Quran the highest center of intellectual activity of humans. This zone is a zone of two forehead lobes found on the front of a human head. The zone that understands emotional intelligence is divided into five elements namely: self-awareness, motivation, self-regulation, empathy and social skills.

This discussion is found in Surah Al-Alaq verses 15-16:

كَلَّا لَئِن لَّمْ يَنْتَهُ لَنَنْسِفَنَّكَ مِنَ الْبَاطِنِ (15) نَاصِيَةٍ كَاذِبَةٍ خَاطِئَةٍ

*Meaning: No! If he does not desist, We will surely drag him by the forelock. A lying, sinning forelock.*

*An-Nashiyah* is the base of the brain where the two lobes of the forehead are located therein is the center of intellectual activity. both of these verses explain about the crown of Abu Jahal who denied the prophet again ungodly. The matter explains the center of lies in the crown. In the discussion it is known lying is one form of human emotion. The thing refers to the first emotion, something the feelings we feel at certain moments. Second, known as physiological nature and based on emotional feelings. Third, the effect or perception. Fourth, the emergence of an impulse or emotion. Fifth, on the way expression.<sup>30</sup>

وَيَوْمَ يُجْشَرُ أَعْدَاءُ اللَّهِ إِلَى النَّارِ فَهُمْ يُوزَعُونَ (19) حَتَّى إِذَا مَا جَاءُوهَا شَهِدَ عَلَيْهِمْ سَمْعُهُمْ وَأَبْصَارُهُمْ وَجُلُودُهُمْ بِمَا كَانُوا يَعْمَلُونَ (20) وَقَالُوا لَوْلَا جِئْتَنَا بِآيَاتٍ أَنْطَقَنَا اللَّهُ الَّذِي أَنْطَقَ كُلَّ شَيْءٍ وَهُوَ خَلَقَكُمْ أَوَّلَ مَرَّةٍ وَإِلَيْهِ تُرْجَعُونَ (21)

*Meaning: And {Mention, O Muhammad}, the Day when the enemies of Allah will be gathered to the fire while they are {driven} assembled in*

<sup>29</sup> Paul E. Dennison, *Brain Gym and Me*, (Jakarta: Grassindo, 2009), p. 117

<sup>30</sup> M. Darwis Hude, *Emosi*, (Jakarta: Erlangga, 2006), p. 17

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rows. *Until, when they reach it, their hearing and their eyes and their skins will testify against them of what they used to do. And they will say to their skins, "Why have you testified against us?" they will say, "We were made to speak by Allah, who has made everything speak; and He created you the first time, and to Him you are returned.*

The verses describes a process of witnessing organs of the body later be a witness in the afterlife. Hearing, vision, skin and organs other body organs centered on the brain. Brain cells will record everthing behavior, gestures of our bodies since we are babies.<sup>31</sup>

## 2.) Definition of the Brain in the Neuroscience Perspective

Neuroscience is ultimate science. The complexity of science is very challenging and interesting because it involves the brain that is the center of life. This knowledge has a very broad application from start marketing (neuro-marketing), web design (neuro-web-design), computer (neuro-simulation), cognitive behavior (neuropsychology), community (neuroladership), pharmacy (neuropharmacology), until neurologist.

Neuroscience studies the workings of the brain, such as anatomy (form and structure of the brain), physiology (the function of parts of the brain), biochemistry (chemical properties and chemical reactions in the brain), molecular biology (molecules or proteins that make up the brain), coupled with psychology (behavior and emotions) and cognitive science (the science of thought processes), computer simulation (computer science, statistics), clinical neurology (medical science and brain diseases).<sup>32</sup>

Thus studying neuroscience, including: structure, function, history, evolution, development, genetics, biochemistry, physiology, pharmacology, informatics, neuroscience, counting and pathology of the nervous system. The range of fields of neuroscience has expanded to include systematic scientific experiments as well as theoretical

<sup>31</sup> Siti Mahmudatun, *Fisiologi Pre Frontal Cerebrum Manusia Perspektif AlQuran*, (Studi Sains Lafadz Nasiyah). Research, Surabaya: UIN Sunan Ampel. 2018.

<sup>32</sup> Taruna Ikrar, *Ilmu Neurosains Modern*, (Yogyakarta: Turos, November 2015), p. 2.

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investigations of the central nervous system and peripheral nervous system of biological organisms.

The human brain inside our heads, weighing about 1.5 kg, is an astonishing living organ consisting of billions of tiny cells. It enables us to sense the world around us, to think and to talk. The human brain is the most complex organ of the body, and arguably the most complex organ of the body, and arguably the most complex thing on earth.<sup>33</sup>

In general, the structure of neurons (nerve cells), as the basic functional units of the nervous system, namely:

1. Nerve cell nucleus, mitochondria, and other organelles.
2. Branches of nerve cells (dendrites): branching nerve cells that receive signals.
3. Projection of the elongation of the cell body that sends the signal (axon).

Furthermore, the division of nerve cells (neurons) by function, consists of two main types, namely:

1. Afferent neurons: sensory neurons that receive and transmit stimuli.
2. Efferent neurons: motor neurons that produce responses in target cells.

In the human brain, there are over 100 billion nerve cells (neurons) that play a role in sending electrical and chemical signals to each other. These nerve cells, supported and protected by neuroglia (glia). This neuroglia functions to: Nourishing neurons, maintaining nerve homeostasis, forming myelin and assisting signal transmission.<sup>34</sup>

There are two main types of glia, microglia and macroglia. Microglia: macrophages capable of phagocytosis, to protect and repair neurons from the central nervous system. While these macroglia are able to move in the

<sup>33</sup>Noname, *Neuroscience: The Science of The Brain*, (British Neuroscience Association: Liverpool), p.1.

<sup>34</sup>Opcit. Taruna Ikrar. P. 5.

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brain, and will multiply and expand when the brain is damaged. Macroglia includes two main subtypes. 1. Astrocytes: provide the right ionic environment for neurons to be able to produce potential action, 2. Oligodendrocytes: form and maintain myelin that surrounds neurons in the central nervous system, 3. Schwann cells: form and maintain myelin that surrounds neurons in the peripheral nervous system.<sup>35</sup>

### 3.) Anatomy of the Brain

The brain is an amazing three organ to controls all functions of the body, interprets information from the outside world, and embodies the essence of the mind and soul. Intelligence, creativity, emotion, and memory are a few of the many things governed by the brain. Protected within the skull, the brain is composed of the cerebrum, cerebellum, and brainstem.

The brain receives information through our five senses: sight, smell, touch, taste, and hearing often many at one time. It assembles the messages in a way that has meaning for us, and can save information in our memory. The brain controls our thoughts, memory and speech, movement of the arms and legs, and the function of many organs within our body.

The Central Nervous System (CNS) is composed of the brain and spinal cord. The Peripheral Nervous System (PNS) is composed of spinal nerves branch from the spinal cord and cranial nerves branch from the brain. The brain is composed of the cerebrum, cerebellum, and brainstem. (Fig. 1).

<sup>35</sup> Roel Klaver, Helga E. De Vries, Geert J. Schenk and Jeroen J.G. Geurts. *Grey Matter Damage in Multiple Sclerosis: A Pathology Perspective*. Journal. 2013. Vol.7, No.1.

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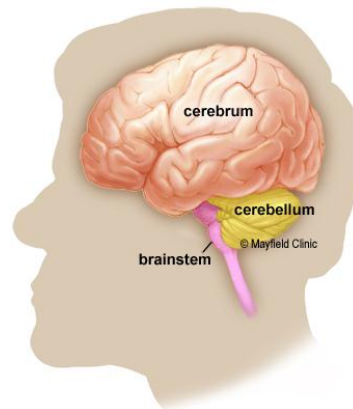


Figure: <https://mayfieldclinic.com/pe-anatbrain.htm#>

- a. Cerebrum: is the largest part of the brain and composed of right and left hemispheres. It performs higher functions like interpreting touch, vision and hearing, as well as speech, reasoning, emotions, learning, and fine control of movement.
- b. Cerebellum: is located under the cerebrum. Function is to coordinate muscle movements, maintain posture, and balance.
- c. Brainstem: acts as a relay center connecting the cerebrum a cerebellum to the spinal cord. It performs many automatic functions such as breathing, heart rate, body temperature, wake and sleep cycles, digestion, sneezing, coughing, vomiting, and swallowing.

The cerebrum is divided into two halves: the right and left hemispheres (Fig. 2) They are joined by a bundle of fibers called the corpus callosum transmits messages from one side to the other. Each hemisphere controls the opposite side of the body. If a stroke occurs on the right side of the brain, your left arm or leg may be weak or paralyzed.

Not all functions of the hemispheres are shared. In general, the left hemisphere controls speech, comprehension, arithmetic, and writing. The right hemisphere controls creativity, spatial ability, artistic, and musical

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skills. The left hemisphere is dominant in hand use and language in about 92% of people.<sup>36</sup>

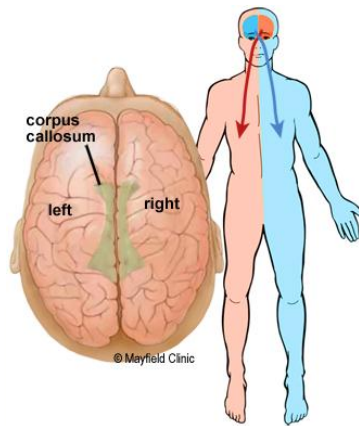


Figure: <https://mayfieldclinic.com/pe-anatbrain.htm#>

### 3. Sleep

#### 1.) Definition of Sleep in Al-Quran Perspective

In the 17th century, there was a scientist named Alexander Stuart. He said sleep occurs because of a decrease in animal spirit in the body because most of it has been drained during the day.

Other scientists also have hypotheses and such assumptions that are completely groundless. Until the 20th century, scientists began to uncover some of the secrets of sleep, namely in the twenties and thirties in the 20th century. They knew sleep was a biological change in the body accompanied by changes in electrical activity in the brain. In this way, they managed to advance to one level in understanding the secret of sleep correctly. They ensure sleep and rest are different. Even though the two are next to each other.

Thus, scientists with the advancement of science have been able to understand the meaning of the verse "and We made your sleep for *subat* (rest)." They realize how much ignorance of the earlier people who

<sup>36</sup> Mayfield Brain and Spain. *Anatomy of the Brain*, (accessed from, <https://mayfieldclinic.com/pe-anatbrain.htm#>, to 18 February 2020 at time 08.00 PM).

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interpret the verse with an interpretation is far from the true nature and completely inaccurate.

In the twenties in the 20th century, a German scientist, Hans Berger, succeeded in creating an electric wave recorder that occurred in the brain, eyes, and muscles. In 1924, two scientists, Adrian and Matthews, realized the importance of Hans Berger's discovery. The discovery has opened up one of the doors of science that made it possible for scientists for the first time in history to uncover some of the secrets of sleep.

We now know for certain that sleep is a biological phenomenon occurs in humans and in every living creature. This biological phenomenon is accompanied by a state of being immobile and disconnected from activity. So, *Subat* is something and sleep is something else. There is evidence that is believed by ordinary people; being motionless and still sometimes is not synonymous with sleep. Because there are people who still move when sleeping soundly. In fact, there are people who get up from bed while still sleeping. In the medical world, this case is called sleep walking. So, sleep is not necessarily accompanied by *subat*. Sleep, scientifically and in fact, is not *subat* as people believed in ancient times, even 1400 years after the Qur'an came down.

Science now says that sleep is an active biological activity in the brain and affects the body. Meanwhile, the *subat* is cut off from movement is something else that accompanies sleep. So makes the body really can rest perfectly during sleep. In fact, the peak activity in the brain is when the dream stage so that one should not be able to move. Someone who is dreaming doesn't move at all. If you see someone who is sleeping moving on the bed, know he is not a fellow dream. So, the condition does not move and the rest of the body when sleeping, including the grace of Allah. for His servants.

The ancient commentators and linguists who mistakenly interpreted the word *subat* as sleep because the ancient scholars were not

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knowledgeable about the function of organs for the scientific secret of sleep. This secret was only known in the first 20th century.

Researchers in the fields of the Qur'anic science and scientific miracles discovered a new science in this verse, "*wa ja'alna naumakum subaata*", as well as finding cues about scientific facts were not previously known.

If people understand the secrets of language correctly, surely they will understand the other meaning of the word *subat*. The word *as-sabt* can also mean a moment of time. Thus, the meaning in the verse is and We make your sleep in a moment and We do not make your sleep long for days and weeks.<sup>37</sup>

## 2.) Verses about Sleep

The Al-Qur'an has mentioned several times about sleep. Sleeping in the Al-Qur'an is written through several words in arabic such as نوم . *Noum* is an Arabic word for sleep. The word of *Noum* and its derivatives are presented several times in the Al-Qur'an. In Al-Baqarah verses 155, Al-Furqaan verses 47, An Naba verses 9, Al-A'raaf verses 47, As Saffat verses 102, Al-Anfaal verses 43, Ar-Room verses 30, Az Zumar verses 42. In the Al-Qur'an, several Arabic words were used to describe the sleep which may be compatible with modern science definition. Therefore, we can describe sleep stage as *Sinah* (سنة) *Nu'ass* (نعاس), and *Hojoo* (هجو), *Ruqood* (رقود) and *Subaat* (سبات).<sup>38</sup>

### a. An-Naum

The word *naum* consist of 3 letters namely *nun*, *waw*, and *mim* the authentic pointing to the meaning of freezing and silence and rest somewhere in the sense of sleeping he doesn't feel something around

<sup>37</sup> Ahmad Syauqi, *Kitab Rahasia Tidur Menurut al-Qur'an, Sunnah Nabi, dan Sains Modern*. (Jakarta Selatan: Tuross, 2018). p.119

<sup>38</sup> Mohammad Reza Heidari, 2014, *Sleep in the Quran and Health Sciences*. Health Spiritual Med Ethics. Vol. 1, No.1, 2014, p.32

him. As the word *naum* from *naama* (نام-ينام) which means a lot of sleep.<sup>39</sup>

According to Ibnu Sayyid the word *naum*, *An-Naum* itself, according to nu'as the word *naum* comes from the (نام-ينام- according to Saibawaih *naum* it's *al-ni'mah*, and its purpose of all that is *naaimun* (نائم) the person who is asleep.

Ibnu Sayyid who slept in one night and according to Saibawaih which mentions the opinion of people *naum* here is *ni'aman* and *nuam* in the sense they replace *waw* (و) (ي) because it has an adjacent meaning in terms of closing down eye.<sup>40</sup> In the al-Qur'an, the use of terms with word from *naama* (نام) any 9 verses. Surah al-Baqarah verses 255, al-Furqan verses 47, an-Naba' verses 9, al-A'raf verses 97, al-Qalam verses 19, as-Shaffat verses 102, al-Anfal verses 43, ar-Room verses 23, az-Zumar verses 42. And in the al-Qur'an word from *naama* repeated times, not all of these verses meaning sleep, but there is also a meaningful dream.<sup>41</sup>

#### b. Nu'as

The word *nu'as* comes the word *naasa*, *yan'asu*, *nuasaa*.<sup>42</sup> Meantime the word *nu'as* (نعاس) itself consist of 3 letters, namely nun (ن) 'ain (ع) and sin (س) meaning sleepy. Example ناقة نعوس (The female camel is sleepy), it rests after running fast because really if the camel has run tight so he is sleepy. The word *nu'as* (نعاس) which means sleep, and an opinion say the word (نعاس) is similar to sleep (sleepy), another opinion says a good night's sleep.

<sup>39</sup> Ibnu Mantsur, *Lisanul al-Arab*, (Kairo: Dar al-Ma'arif) Vol. 2, p.185

<sup>40</sup> Opcit, Ibnu Mansur, p.185.

<sup>41</sup> Muhammad Fu'ad Abd al-Baqi, *Mu'jam al-Mufahras Li al-Alfadzh al-Qur'an*, p.729.

<sup>42</sup> Ahmad Ibnu Fahriss, *Mu'jam Mugayis al-Lugah*, p.361.

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Al-Laits argues the word (نعاس) is resting the body is sleepy and sometimes closes eyes to a short break.<sup>43</sup> Imam al-Azhari argues in essence the word *nu'as* (نعاس) is drowsy, but not to sleep or close eyes when sitting. In the al-Qur'an the word *nu'as* (نعاس) is mentioned twice. In the al-Qur'an, the use of terms with word from *nu'as* any 2 verses. In Surah al-Anfal verses 11 and an-Naba' verses 9.<sup>44</sup>

c. *Subaat*

وَجَعَلْنَا نَوْمَكُمْ سُبَاتًا

*Meaning : And made your sleep (a means for) rest*

*As-Sabt* means comfort, rest, calm and silence. *As-Sabt* also means stopping and retiring from work. The verb *sabata* means to rest. So, the meaning of the above verse is and “We make your sleep as a stop from moving and resting for the body.”

The meaning of the words *sabt* and *subat* is still not understood correctly by linguists in the past. They confuse many meanings in understanding this sentence. There is mention of stopping and retiring from activity, stillness, and calmness of the body, rest, vague sleep, or the beginning of sleep on the head.

Therefore, people are confused in looking at this verse. For this reason, some atheists criticized this verse on the grounds that *subat* is sleep. They say as if this verse is meaningful and we make your sleep as sleep and this is clearly unacceptable.

The reason for this confusion and misunderstanding is sleep is a biological phenomenon whose scientific mysteries and secrets have only recently been revealed by scientists. As for the people in ancient times, they had no knowledge whatsoever about the nature of sleep and its secrets. They really did not understand in the least anything

<sup>43</sup> Ibnu Mansur, *Lisanul al-Arab*, p. 361.

<sup>44</sup> Muhammad Fu'ad Abd al-Baqiy, *Mu'jam al-Mufahras Li al-Alfadz al-Qur'an*, p.707.

related to sleep. Therefore, they are confused and mistaken in understanding this problem, then they judge the absolute truth contained in the above verse based on their ignorance.<sup>45</sup>

d. *Hojoo'*

*Hojoo* (هجووع), in the Arabic mean as little sleep. However, According to Adh-Dhariyat chapter verses 17, believers sleep very little and spend more hours of night asked forgiveness and worship.<sup>46</sup> This word means night sleep.

e. *Yatawaffakum and Tawaffathu*

اللَّهُ يَتَوَفَّى الْأَنْفُسَ حِينَ مَوْتِهَا وَالَّتِي لَمْ تَمُتْ فِي مَنَامِهَا فَيُمْسِكُ الَّتِي قَضَىٰ عَلَيْهَا الْمَوْتَ وَيُرْسِلُ الْأُخْرَىٰ إِلَىٰ أَجَلٍ مُّسَمًّى إِنَّ فِي ذَٰلِكَ لَآيَاتٍ لِّقَوْمٍ يَتَفَكَّرُونَ

*Meaning: Allah takes the souls at the time of their death, and those that do not die {he takes} during their sleep. Then He keeps those for which He has decreed death and releases the others for a specified term. Indeed in that are signs for a people who give thought."*

From this verse it can be concluded God holds the souls of human while sleeping. What is seen when it was in the presence of Allah in the sky, that's a dream right. What was seen when he was released back to his bodies, it was a false dream. A very clear influence of the al-Qur'an was found in the philosophers explanation of dreams. For example, Ibnu Sina explain the true dreams occur as a result of relationships soul with a angel realm during sleep (active mind, according to Ibn Sina's theory), and revelations or inspiraiton were obtained from him. A dream which is chaotic, according to him occurs because of the influence of physical sensations.

Lately some researchers have expressed their opinions about human spiritual power. According to them during sleep the human spirit interested and traveling to different places. They interpret

<sup>45</sup> Opcit. Ahmad Syauqi, p. 119

<sup>46</sup> Noname, *Knowledge of the Quran*. Journal of Muslim Guard. 2003. Vol. 4, p.286.

dreams as things that spirits see in their journeying, while humans are sleeping.<sup>47</sup>

In another verse, Surah al-An'am verses 60-61 is mentioned:

وَهُوَ الَّذِي يَتَوَفَّاكُم بِاللَّيْلِ وَيَعْلَمُ مَا جَرَحْتُم بِالنَّهَارِ ثُمَّ يَبْعَثُكُمْ فِيهِ لِيُقْضَىٰ أَجَلٌ مُّسَمًّى ثُمَّ إِلَيْهِ مَرْجِعُكُمْ ثُمَّ يُنَبِّئُكُم بِمَا كُنتُمْ تَعْمَلُونَ (60) وَهُوَ الْقَاهِرُ فَوْقَ عِبَادِهِ وَيُرْسِلُ عَلَيْكُمْ حَفَظَةً حَتَّىٰ إِذَا جَاءَ أَحَدُكُمُ الْمَوْتُ تَوَفَّتْهُ رُسُلُنَا وَهُمْ لَا يُفِرُّونَ

*Meaning: "And it is He who takes your souls by night and knows what you have committed by day. Then He revives you therein that a specified term may be fulfilled. Then to Him will be your return; then He will inform you about what you used to do. And He is the subjugator over His servants, and He sends over you guardian-angels until, when death comes to one of you, Our messengers take him, and they do not fail {in their duties}."*

In the two verses above, Allah mentions the word death twice, namely the word "yatawaffakum" which is interpreted as the word 'sleep' in the above verse, also in the word "tawaffathu" which means "to be spared". This is about two kinds of death, which is temporary death and death forever. This is explained in verse az-Zumar verses 42.

#### f. *Ruqud*

The word *al-Ruqud* means sleep in very long time. *Al-Ruqud* means sleep in In the al-Qur'an, the use of terms from raqada (رقد) repeated 2 times, namely from of ruqud (رُقود) found in one place, namely Qs. Al-Kahf verses 18 and form marqad (مَرقد) is also found in one place, namely in the Qs. Yasin verses 52.<sup>48</sup>

- Qs. Al Kahfi: 18

<sup>47</sup> Wahyudi Setiawan, *Al-Qur'an Tentang Lupa, Tidur, Mimpi dan Kematian*. Journal Al Murabbi, Vol.2 No.2, January 2016, p.264.

<sup>48</sup> Muhammad Fuad Abd al-Baqiy, *Mu'jam al-Mufahras Li al-Fadh al-Qur'an*, p.323.

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وَتَحْسَبُهُمْ أَيْقَاظًا وَهُمْ رُقُودٌ وَنُقَلِّبُهُمْ ذَاتَ الْيَمِينِ وَذَاتَ الشَّمَالِ وَكَلْبُهُمْ  
بَاسِطٌ ذِرَاعَيْهِ بِالْوَصِيدِ لَوِ اطَّلَعْتَ عَلَيْهِمْ لَوَلَّيْتَ مِنْهُمْ فِرَارًا وَلَمَلِئْتَ مِنْهُمْ  
رُعبًا

Meaning : *“And you would think them awake, while they were asleep. And we turned them to the right and to the left, while their dog stretched his forelegs at the entrance. If you had looked at them, you would have turned from them in flight and been filled by them with terror”*

The use of the word al-ruqud (رُقُود) in this verses is related to the story Ashabul al-Kahf who slept for a long time and even in the hundred years because of the period between the king when the boys were with their dogs exile to the cave then sleep with the king when he wakes up, intermittent several centuries without them knowing before one was on between them going to buy food and apparently the money he uses is no longer valid.

In this verse it is only described about their situation sleep; it is stated that, *“if you had seen it, you would have thought that they are awake and not sleeping because of the state they are like do not sleep by always moving left and right, whereas the dog stretches itself over the mouth of the cave.”* Then it is stated, *“if you had seen it, surely you would have turned away from him and ran away leaving him out of fear of seeing his situation terrible thing.”* This illustrates why they were not disturbed by humans who might pass through the place during their sleep and give an idea of how their bodies are not consumed by the soil because it’s always moving.<sup>49</sup>

- Qs. Yasin: 52

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<sup>49</sup>M. Quraish Shihab, *Ensiklopedi al-Qur'an* (Jakarta: Lentera Hati, 2007). p.847.

قَالُوا يَا وَيْلَنَا مَنْ بَعَثَنَا مِنْ مَرْقَدِنَا هَذَا مَا وَعَدَ الرَّحْمَنُ وَصَدَقَ الْمُرْسَلُونَ

*Meaning: "O woe to us! Who has raised us up from our sleeping place?" {The reply will be}, "This is what the Most Merciful had promised, and the messengers told the truth".*

The use of the word marqad (مرقد) in this verse is related to the statement those who unbelieve when they are raised from their graves then say, "Who has raised us up from our sleeping place?".

The resurrection of believers from their graves is described as if i wake up from sleep. Does not mean in the grave they are not tortured, but it shows how terrible the torment of the afterlife was so as if the torture of the grave has no meaning anymore.<sup>50</sup> But there is interpretation some time before they are resurrected, arises the expression of regret. This opinion was expressed by Ubay ibn Ka'ab, Mujahid explained this period was between two trumpets.<sup>51</sup>

### 3.) Definition of Sleep in the Neuroscience Perspective

Sleep is an active period in which a lot of important processing, restoration, and strengthening occurs. Exactly how this happens and why human bodies are programmed for such a long period of slumber is still somewhat of a mystery. But scientists do understand some of sleep's critical functions, and the reasons need it for optimal health and well being.

One of the vital roles of sleep is to help us solidify and consolidate memories. As go about day, human brains take in an incredible amount of information. Rather than being directly logged and recorded, however,

<sup>50</sup> M.Quraish Shihab, *Ensiklopedi al-Qur'an*, p.847.

<sup>51</sup> Jalaluddin al-Suyuti, *ad-Duur al-Mansur fi Ta'wil bi al-Ma'tsur*, Vol. 12, p. 359.

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these facts and experiences first need to be processed and stored; and many of these steps happen while human sleep. Overnight, bits and pieces of information are transferred from more tentative, short-term memory a process called “consolidation”. Researchers have also shown that after people sleep, they tend to retain information and perform better on memory tasks. Human bodies all require long periods of sleep in order to restore and rejuvenate, to grow muscle, repair tissue, and synthesize hormones.

Healthy sleep is critical for everyone, since all need to retain information and learn skills to thrive in life. But this is likely part of the reason children who acquire language, social, and motor skills at a breathtaking pace throughout their development need more sleep than adults. While adults need 7-9 hours of sleep per night, one year olds need roughly 11 to 14 hours, school age children between 8 and 10. During these critical periods of growth and learning, younger people need a heavy dose of slumber for optimal development and alertness.<sup>52</sup>

#### 4.) Sleep Mechanism

The belief that has been developing is sleep is a time of rest humans need to rest their bodily functions and the mind in order to renew their respective functions and duties. but the latest scientific facts contradict belief, because :

- 1.) During sleep various activities take place in the entire brain and body system in general. in fact, some body functions work more actively when sleeping. but on the other hand, it is also known there are several types of diseases develop more active when we sleep and disappear or are hidden when we wake up.

<sup>52</sup> SleepFoundation.org, *Why Do We Need Sleep*. (<https://sleepfoundation.org>. Access in 29 November 2019).

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- 2.) During long periods of rest some changes and increased activity of the limbs to build new cells, produce hormones needed by the body, and other activities.
- 3.) Meanwhile, some members of the body indeed decrease their activity or rest, for example the heart, brain, and several other body organs which decrease the intensity of their work.
- 4.) State of sleep is closely related to various organs of the body. In a conscious or awake state, there is activity or electricity flow in the brain and when sleeping, the activity or electricity is decreased.

When sleeping at night, we experience several sleep cycles, each cycle divided into several stages. in the first and second stages we experience light sleep. this occurs in the early hours of sleep. in the third and fourth stages we experience deep sleep, or deep sleep.

both of these stages are very important to prepare the body so when awake and ready to move again. lack of deep sleep can cause fatigue during the day. After about ninety minutes after you start sleeping, begin the dream stages or what is known as REM (Rapid Eye Movement). this stage is very important for the brain to refresh its function.

One sleep cycle that starts from the beginning of the first stage to the end of deep sleep (REM) usually takes an hour and a half (between 90 to 100 minutes). sleep time is not deep and the stages decrease gradually along with the movement of sleep stages. each of the first and second stages is divided into four other stages. however, as time moves toward morning, the third and fourth stages are almost no different from the first and second stages.

More clearly, deep sleep (Non-REM) is divided into four stages. the first stage is light sleep which is a transition from a conscious state to a

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state of sleep. at this stage, the body's muscle tissue begins to relax. this happens when someone starts falling asleep. at this stage we sometimes wake up and then go to sleep again so usually people who have just entered the stage of sleep can be awakened easily.

The terms REM (Rapid Eye Movement) and NREM (Non-Rapid Eye Movement) were first used in 1950 by American psychologists Eugen Aserinsky and Nathaniel Kleitman. they revealed that during sleep there were several random periods and movements of the eyeball (REM). they found that when a person is awakened during the REM sleep period, he will say that the dream he experiences is clear and clear.

Scientists believe that REM sleep is very similar to the state of wakefulness, because brain wave activity during REM sleep is characterized by short and random wave patterns similar to brain wave activity when awake. Meanwhile, non-REM sleep is characterized by little or no eye movement.

At this stage of sleep, the average breath and heart rate becomes slower, blood pressure and body temperature often decreases. when a person is in NREM sleep stage and is awakened from sleep, he usually says he has no dreams. or, despite dreaming, the dream is vague and very difficult to remember. Brain activity at this stage of sleep is characterized by long and slow waves, in contrast to brain wave patterns in REM sleep stages and wakefulness.

This sleep phenomenon confirms the wisdom of the Qur'anic verse which states, *“And made your sleep (a means for) rest”*. The commentators say that *subata* means relief from fatigue, a state when a person is overwhelmed with feelings of calm, peace and comfort.

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Thus, sleep is a time of rest or calm in the body from fatigue and fatigue. Sleep is also a time of rest for the brain and heart to get back to their activities well.

Allah says, *“Do they not see that We made the night that they may rest therein and the day giving sight ? Indeed in that are signs for a people who believe.”*

The verse reiterates that night was created and rotated with day with the aim the humans can rest and feel calm. The verse ends with the affirmation all of them are signs that show the power of God and only believers can understand the signs. So, not everyone can feel calm and real rest. True serenity can only be felt by those who give thanks to Allah for all the favors He conferred, including the pleasure of resting at night, while still carrying out the rules and orders of the *Shari'a*.

From this we understand that sleep is not a time of complete loss of human consciousness, but rather a special stage that must be experienced by everyone. When humans sleep, certain activities take place in their bodies. During sleep, we are not in a certain condition or body position, but go back and forth to the left and right. In fact, almost the whole body moves when sleeping. All movements take place or occur during sleep are unconscious movements. Everyone experiences different movements. Even in a person the movements vary from time to time during his sleep. When we enter the stage of deep sleep, reduced body movement. However, people who suffer from certain diseases, such as the heart and lungs, will continue to make their body movements even if they enter the stage of deep sleep. Body movements completely stop when someone enters the REM stage.<sup>53</sup>

<sup>53</sup> Dr. Jamal Elzaky, *Buku Induk Mukjizat Kesehatan Ibadah*. (Jakarta: Zaman, 2011), p. 458.

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## 5.) Biological Time and Sleep Phenomena

Biological time regulates all the activities of organs and tissues in the body and divides them into some division of labor for twenty-four hours. Genetic studies say that biological clocks exist in all living things from very simple creatures to complex creatures like humans.

Biological time is an internal psychological system allows each organism to carry out its life functions harmoniously with the rhythm of the universe, such as the rotation between day and night, and the change of seasons. Biological timers are found in all types of good creatures in plants and animals. However, knowledge about the phenomenon is mostly obtained through research on the daily rhythm (circadian rhythm) regulates the daily behavior of each creature, including when blocked from natural daily markers such as the rising sun. When an organism does not get signs from outside, such as light, which can regulate its biological clock, it will continue to run its biological clock even if it is not exactly 24 hours. The absence of markers from outside the body will in turn make it more distorted from the rhythm of the universe. In a study involving several respondents who were isolated for some time from the outside world, it was found they continued to eat and sleep regularly, but over time their schedules experienced a shift from the usual schedule.

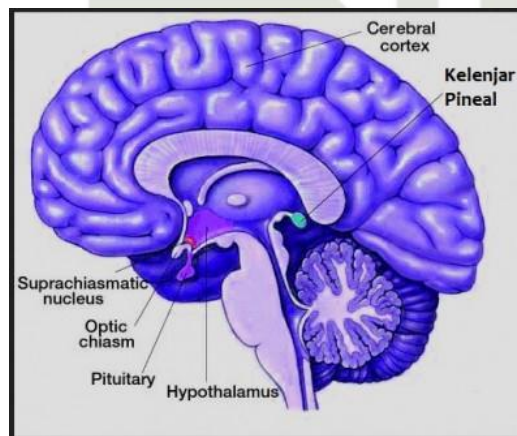


Figure: <https://hisham.id/fungsi-kelenjar-pineal.html>

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Light, especially very bright, is believed to be the most powerful regulator of creature's daily rhythm. Some recent studies have shown that artificial light (such as room lighting) which is seen at all times by the respondents little by little will reset their body cycles, including sleep and wakefulness. It was also found that biological clocks exist in every cell and even in every part of a cell. Furthermore, a part of the body or body tissue separated from the main organism.

Scientists believe that the biological clock in humans is found in the hypothalamus, the part of the brain that regulates basic needs such as hunger, thirst, and sexual desire. The biological clock itself is believed to be a group of nerve cells called the suprachiasmatic nucleus. The pineal gland found in the hypothalamus is responsible for producing the hormone melatonin in response when the body is covered in darkness or lack of light. This hormone has a very important role to regulate the daily rhythm of the human body. Recent studies have found that low doses of melatonin used as a supplement, can trigger drowsiness and ultimately encourage a person to sleep. That's why experts believe that the hormone is very useful to cure sleep disorders or balance the body's rhythm due to jet lag.

Some other studies show that the production of the hormone melantolin which can inhibit the growth of cancer cells is inhibited if we sleep in the light. They also argue that this natural process governed by God takes place at night, when darkness engulfs the body and helps it defend against attacks by cancer agents.

As the darkness of the night triggers the body to produce certain hormones, bright light during the day also triggers the body to produce

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other hormones that strengthen the body's immunity so that the body is protected from various diseases.<sup>54</sup>

## B. Previous Research Result

Based on the author's knowledge, there are several research thesis or books that discuss "The Human Brain As Sleep". Nonetheless, the thesis or book was different from the discussion of the researcher's thesis, there was similiar of research object, with different in discussion. Here a research that discusses about "The Phenomenon of Human Brain As Sleep in the Al-Qur'an and Neuroscience Perspective", as follows :

1. The Story of Sleeping of Ashabul Kahf in the Quran. A research by Nuris Shobaha 2018 UIN Walisongo Semarang. This research concerned with the Neuroscience and Hibernation Perspective. In the story of Ashabul Kahf, exposing the scientific process "sleep" to "wake up" is so obvious that have been described in the surah al-Kahf : 9-26. About spiritual neuroscience can affect their brain and nervous system. In the thesis tell the story of Ashabul Kahf sleep with the theory of hibernation is similar sleep in a long time in the cave. This condition of hibernation aim to survive.<sup>55</sup> The difference with this thesis is to focus more on how the brain works when sleeping. Because, during human sleep the brain never stops working. Besides that, will be explained in this paper, the benefits of good sleep, the brain's work process when humans sleep, especially at night will have a good impact on the body.
2. "Pola Tidur dalam Al-Quran (Kajian Tahlili terhadap QS. Al-Furqon: 47)". A research by Syamsinar, 2016 UIN Alauddin Makassar. This research study about know the benefits of sleep. Because many do not know the benefits of sleep. Thus underestimating the right to sleep itself. Then know the nature of

<sup>54</sup> Opcit. Jamal Elzaky, p.488.

<sup>55</sup> Nuris Shobaha, *The Story of Sleeping of Ashabul Kahf in The Quran*. Thesis, Semarang: UIN Walisongo, 2018.

sleep, and know the form of sleep in Surah Al-Furqon verses 47.<sup>56</sup> The difference with this thesis is the verse used, using surah al kahf verse 18. So that the research differences from the surah in the Al-Quran will be interpreted.

3. “Tidur dalam Al-Quran (Tinjauan Ilmu Kesehatan)”. A research by Tia Nurmilah Lubis, 2017 UIN Sultan Syarif Kasim Riau. This thesis focus on the knowing sleep in the Quran in terms of health science. Knowing about sleep like things, which occurs during sleep, its relationship with dreams, verses of the Quran about sleep and how to sleep well.<sup>57</sup> The difference with this thesis is the author explains about the mechanism of sleep, so it is explained that the mechanism of human sleep in which the brain still works. In the theoretical basis there is also during sleep, but not explained in detail as explained in the thesis by Tia Nurmilah.
4. The Journal that discussed Phenomena of Sleep, can be seen in several one such as: *Sleep Phenomena from the Perspective of Islam and Science* . Journal Volume 67, Issue 1, February 2014 by Farahwahida Mod Yusuf. This Journal focus on Sleeps as a sign of Allah Almighty power, duration of sleep, and sleep from the viewpoint of science and Islam, the sleeping positions based on Sunnah and Science, and the last about the prohibition of sleeping between two praying times and its rule.<sup>58</sup> The difference with this thesis is the focal point on the human brain when sleeping and the impact after sleep itself. Whereas in the thesis it only discuss about sleep.
5. *The Neuroscience Study of Religious and Spiritual Phenomena or Why Allah Doesn't Use Biostatic*. Journal Volume 40, Issue 2, June 2005 by Andrew B. Newberg M.D.,. This journal focus on methodological issues to determine which areas have weakness and strengths in the current

<sup>56</sup> Syamsinar, *Pola Tidur dalam Al-Quran (Kajian Tahlili terhadap QS. Al-Furqon: 47)*. Thesis, Makassar: UIN Alauddin, 2016.

<sup>57</sup> Tia Nurmilah Lubis, *Tidur dalam Al Quran (Tinjauan Ilmu Kesehatan)*. Thesis, Riau: UIN Suska, 2017.

<sup>58</sup> Farahwahida Mohd Yusuf, *Sleep Phenomena from the Perspective of Islam and Science*. 2014. *Journal Teknologi*. Vol 67, No. 1

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studies.<sup>59</sup> The difference with this thesis is the author describes the work methods, anatomy and function of the brain in the theoretical foundation. While the journal does not explain.

6. The Journal discussed Neuroscience, can be seen in several one such as: Sleep from Neuroscience and Islamic Perspective. Journal Volume 9, 2010 by Mohd Amzari Tumiran and others. This research analyzed sleep from both perspectives, determined the level of comprehension of sleep related concept by Muslim with science background in the Malaysian education system and consequently correlated their understanding to sleep related practices.<sup>60</sup> The difference with this thesis is the author only analyzes scientifically and the Al-Qur'an regarding the sleep human brain which focuses on surah Al-Kahf 18 verses.

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<sup>59</sup> Andrew B. Newberg, *The Neuroscience Study of Religious and Spiritual Phenomena or Why Allah Doesn't Use Biostatic*. Journal. 2015. Vol. 40, No. 2

<sup>60</sup> Mohd Amzari Tumiran, *Sleep from Neuroscience and Islamic Perspective*. 2010. Journal. Vol. 9



## CHAPTER III

### RESEARCH METHOD

#### A. Methodological Approach

The method as in the big Indonesian dictionary is the way who are organized and think carefully about achieving their intentions. Meanwhile, the method in this study is a qualitative method (qualitative research). Qualitative research methods as revealed by Bogdan and Taylor (L.J. Maleong, 2011: 4) as a research procedure that produces data descriptive form of written or oral words from people and behavior can be observed.

In addition, qualitative research methods according to Syaodih Nana, (2007: 60) is a way to describe and analyze phenomena, events, social activities, attitudes of beliefs, perceptions, people's thoughts in a manner individual or group.

According to Sugiyono (2008: 15) that descriptive qualitative research is a research method based on postpositivism philosophy which is usually used to examine conditions natural objectives where the researcher acts as a key instrument. Meanwhile Nawawi and Martini (1994: 73) define descriptive methods as a method that describes a certain objective situation or event based on facts that appear or as they should be later accompanied by efforts to draw general conclusions based on facts historically.<sup>61</sup>

This research is a qualitative research that is research which results in an analysis procedure that does not use a procedure statistical analysis or other quantification methods.<sup>62</sup>

<sup>61</sup> Agustinus Ufie, *Kearifan Local (local wisdom) Budaya Ain Ni Ain Masyarakat Kei Sebagai Sumber Belajar Sejarah Lokal Untuk Memperkokoh Kohesi Sosial Siswa*. Research, Bandung: Universitas Pendidikan Indonesia, 2013.

<sup>62</sup> Lexy J. Moeloeng, *Metodologi Penelitian Kualitatif Edisi Revisi*, (Bandung: PT. Remaja Rosdakarya Offset, 2006), p. 6.

## B. Types of Research

This study was library (library research). Library research is any effort made by researchers to gather information relevant to the topic or problem to be or is being studied. That information can be obtained from scientific books, research reports, scientific essay, theses and dissertations, regulations, provisions, yearbooks, encyclopedias and written sources both printed and electronic.

Library research is an activity that can not be separated from a study. Theories that underlie the problem and the field to be investigated can be found by conducting library research. In addition, a study can obtain information about similar studies or those related to the research. And previous studies. By conducting library research researchers can utilize all the information and thoughts relevant to their research.<sup>63</sup>

According to Mestika Zed explained that this literature study had 4 characteristics, namely :

- a. That the researcher is dealing directly with text (nash) or data numbers and not with knowledge from the field or witnesses in the form of events, people or other objects.
- b. The library data is “ready made”, meaning that the researcher is not leaving everywhere, except only dealing directly with the source of the source already available in the library.
- c. Library data are generally sources of secondary funding, in the sense that researcher are get material from the second hand and not original data from the hand first in the field.
- d. Library data conditions are not limited by space and time, meaning whenever it is coming and going the data will never change because it already has is “dead” data stored in written records (text, numbers, image, recording, tape or film).<sup>64</sup>

<sup>63</sup> Samhis Setiawan, *Studi Kepustakaan*, (<https://gurupendidikan.co.id> , accessed to 9 January 2020).

<sup>64</sup> Mestika Zed, *Metode Penelitian Kepustakaan*, (Jakarta: Yayasan Obor Indonesia, 2004), p. 4.

## C Data Source

What is meant by data is all information concerning all matters relating to the purpose of research. According to the source, research data are classified as primary data and secondary data. The data used by the author in this study consisted of data primary and secondary data, namely:

### a. Primary Data

Primary Data is an authorized source of information and responsible for the success of data storage or requesting the first data source, collected by researchers in full directly from the data source. Primary data is also referred to as the original data or new data.<sup>65</sup> Primary data sources that writer use are: The Verses 18 of The Surah Al-Kahfi.

### b. Secondary Data

Secondary data is a data source that supports and complements primary data. The secondary sources of data the authors make as a theoretical basis second in the thesis study after the primary data source. This data serves as a primary data support, with the primary data source it will be increasingly strengthen the argumentation and theoretical basis in his study.<sup>66</sup>

The secondary data in this study is the interpretation and books that support it contains the phenomenon of the human brain as sleep in Surah al-Kahf of the verses 18, including:

- 1) Al Jauhari fi Tafsir Al-Quran by Thantawi Jauhari, Mafatihul Al-Ghaib by Fakhruddin Al-Razi.
- 2) Al-Azhar by Hamka, Ibnu Katsir Interpretation by Ibnu Katsir, Al-Wasith Interpretation by Wahbah Az-Zuhaili.
- 3) Prof. Dr. Ahmad Syauqi Ibrahim, Kitab Rahasia Tidur Menurut Al-Qurán, Sunnah Nabi, dan Sains Modern, Jakarta: Turos, 2018.

<sup>65</sup> Muhammad Ali, *Penelitian Kependidikan: Prosedur dan Strategi*, (Bandung: Angkasa 1987), p. 4.

<sup>66</sup> Joko Subagyo, *Metode Penelitian dalam Teori dan Praktek*, (Jakarta: PT Rineka Cipta, 2004), p. 99.

- 4) Dr. Jamal Elzaky, Buku Pintar Mukjizat Kesehatan Ibadah, Jakarta: Zaman, 2015.
- 5) DR. Taruna Ikrar, Ilmu Neurosains Modern, Yogyakarta: Pustaka Pelajar, 2015.

#### D. Method of Collecting Data

The collecting data is supported by books, journals, and papers that have relationship to the topic. The sources that served as qualitative research data derived from written materials that appropriate with the themes discussed. This research is a series of scientific activities in problem solving. The researcher sought to find the phenomena of human brain while sleeping in the Quran and Science perspective.

The steps in the data collection through several stages, as follow:

1. Finding and collecting literatur
2. Collecting information from variety of sources in the library or other sources related to the discussion of the themes “Human Brain as Sleep”.

The researcher uses comparison study method. The method of interpretation of comparison has a very broad and many objects. The narrative pattern of thought in applying the comparative method is depicted in the form of a circular area so as to form a wider horizontal plane. This is possible because what is the main charateristic of this method is the comparison, both the comparison of the al-Qur’an with the al-Qur’an, the al-Qur’an with hadith, the al-Qur’an with the bible, the al-Qur’an with the science.

#### E. Data Analysis

Data analysis is defined as the effort of data that is already available and then processed with statistics and can be used to answer the problem formulation in research. thus, data analysis techniques can be interpreted as a way of carrying out an analysis of the data, with the aim of processing the data to answer the problem formulation.

kinds of data analysis based on processing techniques are divided into 2 namely: descriptive analysis and inference analysis. Descriptive analysis seeks to describe the various characteristics of data derived from a sample. Inference analysis seeks to make various inferences on a set of data from a sample. Such inference actions such as making estimates, forecasting, decision making of two or more variables. in the analysis of inference that is processed are two or more variables that are complained for example analysis of relationships, effects, differences between variables or more.

The analytical method used in this research is descriptive analysis that provides a picture or a painting systematic, factual and accurate regarding phenomena or relationships between the phenomena investigated, in this case is the human brain as sleep contained in the al-Qur'an. This method which chosen because descriptive methods are able to provide basic, broad, actual, and functional information for development of science or everyday life.

The broadest field to describe, of course is form neuroscience in accordance with the phenomena of human brain as sleep, especially again is a need for (*tafsir ilmi*) which links the al-Quran to science.

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## CHAPTER V

### CONCLUSION

#### A. Conclusion

As an analysis of the work of the human brain as sleep in the al-Qur'an and Neuroscience perspective, it can be concluded, that:

1. Verse 18 explains, the word *aiqazhan* "And you think they are awake, even though they are sleeping. And we turn them back and forth right and left ". This is point of view a research about the work of human brain as sleep. Because, there is a discussion of neuroscience. The word used in this verse is "Ruqud". Which means sleep (sleep is not normal in general. With a long period of time biologically. However, it looks briefly as felt by young *ashabul kahfi*. The word of *ruqud* is described in two sleep conditions. Sleep is temporary and awakens again. Then sleep when dead and resurrected from the grave like waking up from sleep). In addition, the verse explains about the condition of those who are turned upside down while sleeping. That here there is scholarship that needs to be examined to add insight.
2. Whereas the analysis in neuroscience says *aiqazhan* as if awake is due to rapid eye movement (REM). The phenomenon of rapid eye movements has attracted the attention of scientists. It should be noted that the first four stages are accompanied by fluctuating muscle tension. Therefore, the body changes position in bed.

#### B. Suggestion

Based on the results of the thesis research on "The Phenomenon of the Human Brain as Sleep in the Al-Qur'an and Neuroscience Perspective", the researcher provides suggestions to related parties based on the events that have been analyzed, including:

1. The importance of paying attention to sleep patterns so that the process of sleep can produce a positive impact on physical and spiritual health.

2. After studying the work process of the human brain during sleep which there are four cycles that produce deep sleep, dreams in sleep. And it reminds us not to stay up late because that habit can have a less than optimal impact on our stamina in the morning. We know, sleep is not only to rest the body but improve blood cells, memory in the brain, and restore stamina.
3. Sleeping position is very important to note. As the Messenger of Allah has practiced it. Certainly, by paying attention to sleeping position is useful for maintaining our health.

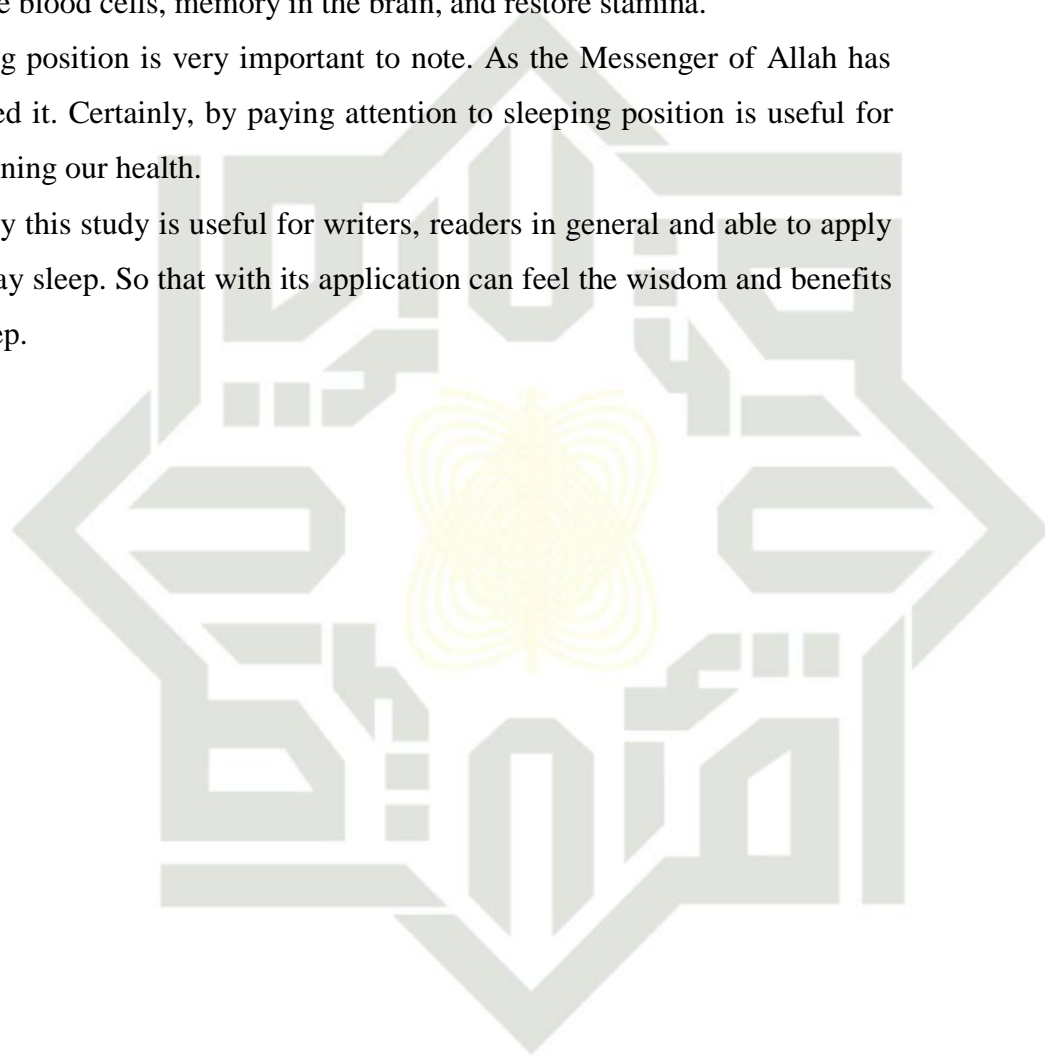
Hopefully this study is useful for writers, readers in general and able to apply it in everyday sleep. So that with its application can feel the wisdom and benefits of good sleep.

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