

Sleep in the Quran and Health Sciences

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Abstract

Background and Objectives: Sleep is a sign of the greatness of God. In this article sleep is described from Quran and modern health sciences.

Methods: This is a qualitative systematic review. Data were gathered from the Quran, related Islamic narratives and literatures. Words that were searched included sleep, sleep stages, Subaat, Hojoo, Ruqood, Nu'ass, Sinah.

Results: The results showed that the Arabic words in the Quran about sleep are Sinah, Nu'ass, Hojoo, Ruqood and Subaa. These descriptions about sleep from Quran perspective are consistent with different sleep stages that have been recognized by modern medicine.

Conclusion: The Quran and Hadith have described about the types of sleep and the importance and sleeping patterns. In Quran perspective, human is a creature that needs light at day and darkness at night and sleep is an invisible blessing that merciful God gives peace and welfare to his creatures.

Keywords: Quran; Sleep; Islam; Sleep Stages.

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Introduction

Sleep is one of important biological periods in human. It can reconstruct and have a profound effect on the biological, physical and mental powers of mankind that causes balance and maintenance of energy in the brain (1-3). Sleep is necessary for energy conservation, appearance and physical well-being. During sleep, hormones like epinephrine, serotonin and growth hormone are released and chemical changes occur in the body to increase cellular nutrition and activity for the next day. Also, reconstruction, reorganization, enhancement of memory and learning occur in the nervous system. In addition, sleep reduces stress and anxiety. Sleep can help focus and have better attention, consistency and enjoy daily activities (4).

Sleep is affected by the external and internal factors such as age, sex; drugs, disease and surgery (1). Increasing activities in the industry, services and trade have caused more people to have sleep disorders (5) and decrease their efficiency (6). A few decades ago, the different stages of sleep have been studied from various aspects after the recognition of sleep structure, (5). The prevalence of sleep disorders is estimated between 15– 42 percent (7). Epidemiological studies show that more than half of the elderly suffer from chronic sleep disorders (8, 9). People who have sleep disorders do not only have fatigue, but also suffer from cellular repair, defects in memory and learning; increase stress and anxiety reduces quality of life (3). Rhythm sleep disorders in addition to threatening human health harm the social activities and cause

mental and social disorders (10). Research has shown that sleep disorders, sleep apnea and insomnia are associated with cardio metabolic risk (11). The researchers suggest that chronic lack of sleep can increase the risk of obesity and diabetes (12) and sleep deprivation can have bad effects on concentration, memory, mood and quality of life. In addition, recent studies have shown that sleep deprivation can disrupt endocrine and metabolic functions (13). Research shows that insomnia is the most common known sleep disorder (14). Insomnia is debilitating and distressing condition which affects the quality of life, work and daily activities, psychological and many social aspects (15). Sleep deprivation triggers anxiety, irritability, nervousness, increased heart rate and myocardial oxygen demands (16). Sleep is a natural process that occurs regularly every 24 hours. There are two main types of sleep:

A: rapid eye movement sleep: occurs several times throughout the night and we see dreams through it. This phase of sleep composes almost fifth of sleeping time and the brain is very active and body muscles are at rest and eyes quickly move to the left and to the right.

The sympathetic system is activated and skeletal muscle tone is lost. Rapid eye movement is seen. Heartbeat is irregular and blood pressure decreases. Breathing becomes shallow and irregular. Cerebral activity increases. All voluntary muscles are paralyzed. Myocardial infarction increases in individuals susceptible to cardiac problems. Oxygen consumption is at optimal. Sudden contractions in fingers and toes occur. Erection in the men and blood congestion in the clitoris occurs in women. At this stage body temperature should not set correctly.

The body temperature is equal to the environment temperature at this phase. This cycle takes about 10 min. Of course, in the next cycles, the time of stage 3 and 4 decreases and the time of REM period increases. Of course, in the next cycles, the duration of stages 3 and 4 sleep and REM time increases. However, in subsequent cycles reduced the duration of stages 3 and 4 sleep reduced and

REM time increases, so that the final stage of REM takes one hour.

B: Non rapid eye movement sleep: At this time, the brain is quiet but body moves. Hormones are released into the circulatory system and help to decreasing fatigue and exhaustion due to daily activities. 75 to 80 percent of the total time of sleep is related to Non REM. Parasympathetic system is activated. This type of sleep has four stages:

1- Stage before falling asleep: The person may experience sleep movement and hallucinations. Breathing becomes slow, heart rate is reduced and blood pressure decreases, brain temperature is increased and blood flow to the brain decreases. The eyes shake a little. If a person wakes up at this stage, It is like that he/she has not slept at all. This stage lasts 5 to 10 minutes.

2- Light sleep: in this stage of sleep, conscious awareness of the external environment will disappear, a person can easily be awoken by a call up, blood pressure, body temperature, heart function and metabolism are reduced. This stage last 45 to 55 percent of the total time of sleep. It also takes 5 to 15 minutes.

3- Slow wave: This stage is the stage of deep sleep. More efforts should be made to awaken the individual. It also takes 5 to 15 minutes. It takes 3 to 8 percent of total sleep. At this stage, blood pressure decreases. There is a probability of sleep talking or walking. However, when a person wakes up, he/she does not remember the sleep events.

4-: Deep sleep with slow waves: This stage account 10 to 15 percent of total sleep. Breathing becomes rhythmic. It is difficult to awaken someone. Night terror, enuresis, and sleep talking occur at this stage. If the person wakes up at this stage he/she feels confusion or wandering and unable to walk properly. This stage is termed as sleep inertia. The activities and functions of the body are reduced significantly. Transforming from stage 1 to stage 2 occurs about five times a day and closer to morning, our dream increases.

Types of sleep from Quran perspective

Noum

Noum is an Arabic word for sleep. The word of Noum and its derivatives are presented several times in the Quran. Some commentators believe that "Noum" is part of a dream. In Chapter As-Saaffat, of Ibrahim (pbuh) stated: "النّٰى ارى فى المنام" I've seen in a dream ..."

In the Persian language there is no clear distinction between the word sleep and dream, In fact sleep is an activity that the dream is a part of it. Dream is an interpretive section of sleep. The root word of "Dream" is from the word visible which means 'to see' (22) (table 1).

Table1: Verses about sleep in Quran

Verse	Place of inspiration	Verse number	Word	Chapter
وَلَنَبْلُوَنَّكُمْ بِشَيْءٍ مِّنَ الْخَوْفِ وَالْجُوعِ وَنَقْصٍ مِّنَ الْأَمْوَالِ وَالْأَنْفُسِ وَالثَّمَرَاتِ وَبَشِّرِ الصَّابِرِينَ And we will most certainly try you with somewhat of fear and hunger and loss of property and lives and fruits; and give good news to the patient, وَهُوَ الَّذِي جَعَلَ لَكُمُ اللَّيْلَ لِيَاسَا وَالنَّوْمَ سُبَاتًا وَجَعَلَ النَّهَارَ نُشُورًا	Medina	155	النوم	بقره Al-Baqara
And He who made the night a covering for you and the sleep a rest and He made the day to rise up again. وَجَعَلْنَا نَوْمَكُمْ سُبَاتًا	Mecca	47	النوم	فرقان Al-Furqan
And We made your sleep to be your rest. أَفَأَمِنَ أَهْلُ الْقُرَىٰ أَن يَأْتِيَهُمْ بَأْسُنَا نَيَاتًا وَهُمْ نَائِمُونَ	Mecca	9	نومكم	النبا An-Naba
What! Do the people of the towns then feel secure from our punishment coming to them at night while they sleep? فَطَافَ عَلَيْهَا طَائِفٌ مِّن رَّبِّكَ وَهُمْ نَائِمُونَ	Mecca	97	نائمون	اعراف Al-Araf
Then there came on the (garden) a visitation from thy from thy Lord, (which swept away) all around while they were asleep. فَلَمَّا بَلَغَ مَعَهُ السَّعْيُ قَالَ يَا بُنَيَّ إِنِّي أَرَىٰ فِي الْمَنَامِ أَنِّي أَذْبَحُكَ فَانظُرْ مَاذَا تَرَىٰ قَالَ يَا أَبَتِ افْعَلْ مَا تُؤْمَرُ سَتَجِدُنِي إِن شَاءَ اللَّهُ مِنَ الصَّابِرِينَ.	Mecca	19	نائمون	القلم Al-Qalam
Then when (the son) reached (the age of) (serious) work with him, he said: "O my son! I see in vision that I offer thee in sacrifice: now see what is thy view!" (The son) said: "O my father! Do as thou art commanded: thou will find me if Allah so wills one practicing Patience and Constancy!" إِذْ يُرِيكُهُمُ اللَّهُ فِي مَنَامِكَ قَلِيلًا وَلَوْ أَرَاكَهُمْ كَثِيرًا لَّفَتَسَلَتُهُمْ وَلَتَنَزَّاعَتُنَّ فِي الْأَمْرِ وَلَكِنَّ اللَّهَ سَلَّمَ إِنَّهُ عَلِيمٌ بِذَاتِ الصُّدُورِ.	Mecca	102	المنام	صافات As-Saaffat
Remember in thy dream Allah showed them to thee as few: if He had shown them to thee as many, ye would surely have been discouraged, and ye would surely have disputed in (your) decision: but Allah saved (you): for He knoweth well the (secrets) of (all) hearts. وَمِنْ آيَاتِهِ مَنَامُكُمْ بِاللَّيْلِ وَالنَّهَارِ وَابْتِعَاؤُكُمْ مِنْ فَضْلِهِ إِنَّ فِي ذَلِكَ لَآيَاتٍ لِّقَوْمٍ يَسْمَعُونَ.	Medina	43	منامك	انفال Al-Anfal
And one of His signs is that He created mates for you from yourselves that you may find rest in them, and He put between you love and compassion; most surely there are signs in this for people who reflect. اللَّهُ يَتَوَفَّى الْأَنْفُسَ حِينَ مَوْتِهَا وَالَّتِي لَمْ تَمُتْ فِي مَنَامِهَا فِيمَنِّيكَ الَّذِي قَضَىٰ عَلَيْهَا الْمَوْتَ وَيُرْسِلَ الْأُخْرَىٰ إِلَىٰ أَجَلٍ مُّسَمًّى إِنَّ فِي ذَلِكَ لَآيَاتٍ لِّقَوْمٍ يَتَفَكَّرُونَ.	Mecca	30	منامكم	روم Ar-Room
It is Allah that takes the souls (of men) at death: and those that die not (He takes) during their sleep: those on whom He has passed the decree of death, He keeps back (from returning to life), but the rest He sends (to their bodies) for a term appointed. Verily in this are Signs for those who reflect.	Mecca	42	منامها	زمر Az-Zumar

In the 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 (سنه) Nu'ass (نعاس), and Hojoo (هجوع), Ruqood (رقود) and Subaat. (سيات).

Sinah

This word has been defined as "slumber" or "dozing off for a very short period". In this type of sleep, Person is conscious to environmental stimuli. This may correspond to stage one of sleep identified by modern sleep science. The word of Sinah (from sin) means the weakening of the body in the beginning of sleep and Noum (نوم) means the body is immovable in sleep. When the evolution of sleep in natural organisms go to sleep, sensory and cognition are disabled. But the word has another meaning, and that is what a man dreams in his sleep, (which means the visibility is watching) (23). Also, it has been noted that Sinah means little sleep. The above verse means that much sleep is not for God (24). In verse 255 of Al-Baqara chapter 'اللَّهُ لَا إِلَهَ إِلَّا هُوَ' , 'الْحَيُّ الْقَيُّومُ لَا تَأْخُذُهُ سِنَّةٌ وَلَا نَوْمٌ' it describes that God is unique, alive and eternal, neither slumber nor sleep overtake him. It is said in French: "Ni somnolence ni sommeil ne Le saisissent."

Sinah is translated in Persian that a man neither slumber nor fall upon deep sleep and Noum is a regular sleep. لا تأخذه سنن ولا نوم means that he neither fall in slumber nor deep sleep. Some say: the meaning of this sentence is that he did not forget the people. Nap can have good potential and improve our daily lives if there was appropriate planning for it. Findings indicate that a scheduled nap improves waking up after a normal night's sleep and also Neutralize sleep deprivation effects on consciousness. Epidemiological studies show that several times of short nap weekly, reduces the risk of cardiovascular disorders (26).

Nu'ass

Nu'ass, is called the beginning of sleep and light sleep and relaxation. A Quraysh army enters into Badr region with war equipment and enough food and the women singers to energize the warriors. At first, they closed Badr

wells, but the Muslims were suffering from insecurity. When the Prophet saw that his followers could not sleep before the night of the war and faced with exhausted body against the enemy, gave God's good news that the angels came to help and empathized with them so they could all sleep gently at night. In Al-Anfal chapter verse 11 God says: Remember when God made light sleep for relaxation and send you rain from the sky to clean and wipe out the devil from your hearts and make your steps strong with it. In Ael-e-Imran chapter, Verse 154 God says: After (the excitement) of the distress, He sent down calm on a band of you, to overcome with slumber while another band was stirred to anxiety by their own feelings, moved by wrong suspicions of Allah, suspicions due to Ignorance. The word of 'Noas' in this verse is light sleep (nap) that may be synonymous with the first and second stage of sleep. Recently it has been suggested that light sleep can reduce stress and blood pressure. Essential changes in blood pressure occur during switching off lights and at the beginning of the first stage (27-29).

Ruqood

There are various descriptions for this word. The best definition is long time sleep. In Al-Kahf chapter, verse 18 God says: "وَتَحْسِبُهُمْ أَيْقَاطًا" وَهُمْ رُقُودٌ وَنَقَلْتَهُمْ دَاتَ الْيَمِينِ وَدَاتَ الشَّمَالِ وَكَلْبُهُمْ بَاسِطٌ ذِرَاعَيْهِ بِالْوَصِيدِ لَوِ اطَّلَعْتَ عَلَيْهِمْ لَوَلَّيْتَ مِنْهُمْ فِرَارًا وَلَمْلَمْتَ مِنْهُمْ رُعبًا" Thou wouldst have deemed them awake, whilst they were asleep, and We turned them on their right and their left sides: their dog stretching forth his two forelegs on the threshold: if thou hadst come up on to them, thou wouldst have certainly turned back from them in flight, and wouldst certainly have been filled with terror of them. A frequent question is about prolonged sleep and how to survive in this situation. In this verse, God tells about the solution to prevent decubitus ulcer (bedsore). Although, people had knowledge about this phenomenon but it was not a reason for them to know about its treatment. If you look at them in a cave, you find them awake, while they are asleep. Some believed that such statement that they were in their sleep, but their eyes were open and the breathed slowly spoke

together but no speech really. Some believed that the similarity to awaken the person move side to side. We turned their body side to side. Aboharireh tells about this sentence: their body position was changed twice a year. But Ebne Abbas says: their position was changed once a year (25). Today, it is recognized that people who sleep too long in one position have complications such as bedsores and blood clots.

Hojoo

Hojoo in the Arabic language means little sleep. However, According to Adh-Dhariyat chapter verse 17, believers sleep very little and spend more hours of night asked forgiveness and worship (31). This word means night sleep (32). Subaat is the Arabic word meaning disruption (21). In An-Naba chapter verse 9 God says: And made your sleep for rest (22).

Subaat

Subaat may be indicative of disconnection from the surroundings. In this verse God says: we did sleep for your comfort. Therefore, we can consider 'Subaat' as deep sleep and it is synonymous with slow wave sleep. From the perspective of modern science (32). It is suggested that the origin of the word of 'Subaat' is from disruption, shut down and rest (33). Allameh Tabatabaee says in Al-mizan: Subaat means welfare and comfort. Because it brings peace and reconstruction of physical power and it can prevent of fatigue due to awakening and self-possession (19). Some say that the word of "Subaat" means disruption. This description is for disruption of body during sleep. This definition is close to before description. Some suggested that Subaat means dying and if God present it as dying is not only for this verse but also in another verse 'هو الذي ' يتوفىكم بالليل. The meaning of dying is far from this definition. God describes that sleep is not dying and says الله يتوفى الانفس حين موتها و التي لم تمت في منامها. Therefore dying statement is far from this definition. In other words, sleep is not dying (23).

Ayatollah Makarem shirazi says in NOOR interpretation that: Subaat (سبات) is from Sabt (سبت) and means disruption and leisure for

rest. As Saturday 'يوم السبت' in Arabic language from the Jewish definition that Saturday was for leisure. Subaat is a fine description of leisure in considerable physical and psychological parts of the sleeping human.

Discussion

Sleep is an important to picin Islamic literature. Quran and Hadith talk about the sleep types, importance of sleep and good sleep practices. In Quran, human beings need the light of day and darkness at night. The Quran, Surah 47 verse ' وَهُوَ الَّذِي جَعَلَ لَكُمُ اللَّيْلَ لِبَاسًا وَالنَّوْمَ ' وَجَعَلَ النَّهَارَ نُشُورًا says: "And He it is Who made the night a covering for you, and the sleep a rest, and He made the day to rise up again". Besides, Muslims have shown great interest in dreams and dream interpretation (17). Today, 2.1 billion of Muslims follow up Islam orders about sleep in their daily activities (18).

From Quran perspective, God provide sleep for peace and comfort of human (7). In Al-Furqan chapter (verse 47) God says: And He it is Who makes the Night as a Robe for you; and Sleep as Repose and makes the Day (as it were) a Resurrection. Sleep is a sign of the greatness of the God. In the Ar-Room chapter (verse 23) God says: And among His Signs is the sleep that ye take by night and by day, and the quest that ye (make for livelihood) out of His Bounty: verily in that are Signs for those who hearken (19). One of God signs is your sleep at day and night and your work for applying the grace of the Lord. And one of His signs is your sleeping and your seeking of His grace by night and (by) day; most surely there are signs in this for a people who would hear. The Quran has various descriptions of sleep. Religious literatures are full of resources which are related to sleep (20,21). Although sleep medicine is a relative new science in medicine, but human have always been interested in sleeping since the beginning.

Conclusion:

Scientists have many discussions on the topic of sleep and its nature. Some believe that sleep is due to transfer of the blood from the brain to other parts of the body. Thus, they consider

physical etiology for it. Some believe that excessive physical activities cause to accumulate toxic material in the body which can affect on the CNS and sleep induction. This is a chemical etiology. There is a neural etiology also. In this hypothesis, there is a special central nervous system in the brain which is the principle of continuous movements, falls and shut down due to excessive fatigue. But no hypotheses did not present a clear response to sleep question. However, we cannot deny the effect of these factors. Our inability to clarifying sleep subject is for their material thinking of sleep. Meanwhile, before sleep was a physical phenomenon it is a spiritual phenomenon and without accurate recognition, its interpretation is impossible. What was discussed in this paper indicate that the most accurate interpretation for sleep is in Quran. Sleep is a separation of the soul from the body, but not complete separation. Therefore, when God orders to this separation, consciousness is inactive and there are no sensations and movement, but any necessary actions such as heart beat, circulation and respiration continues. Although the identity of sleep is considered body shut down, but from spiritual aspects, it is the way to escape and return to inside and heaven. Overall, from the results, we can consider 'Sinah' and 'Hojoo' from the perspective of the Quran with the first stage of sleep, 'Nu'ass' the beginning of sleep and light sleep, 'Ruqood' is synonymous with long sleep and "Subaat" is slow wave sleep. According to the terms listed in this article from perspective of the Quran, we can understand the special consideration of the Quran from physical and spiritual aspects. However, is necessary to more researches about sleep from Islam perspective.

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