

## The Mystery of Dreams, Relation with Sleep, Dream Formation Process and Its Impact on People's Well Being

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### ABSTRACT

The dream is an empirical invention for all human beings. Research on dreams is still underdeveloped. Even so, owning one is still beyond the reach of the average person. However, there is a curiosity about dreams and some people even try to interpret these dreams. While studying dreams, sleep and the accompanying factors need to be treated scientifically. Dreams do not directly affect human life however they indirectly affect on wellbeing of people. In this study we have tried to see what the relationship between sleep and dreams is. Attempts have been made to provide information on how dreams are formed. The types and characteristics of dreams are also elaborated. The information regarding how we failed to control over dreams is also mentioned. Attempts have also been made to shed light on your role in dreams, the body's response to dreams, your age and dreams. The advantages and disadvantages of dreams are also mentioned. Finally, the meaning of dreams is explained. How dreams affect our daily life is also explained. In conclusion, the mystery of dreams needs to be understood by common people to remove or rectify the fear of dreams and to avoid impact of dreaming on emotional, behavioral, mental and physical well being of people.

**Keywords:** *Dream, Sleep, Wellbeing, NREM, REM, Nightmares, Lucid*

The experience of dream comes to all human beings on earth. Why do we dream? How do we dream? What do dreams mean? The answer to all these questions is still a dream and research on this topic is at its infancy. The first attempt to explore dreams scientifically occurred at the dawn of the 20th century, when Sigmund Freud published "The Interpretation of Dreams" (Freud, 1900). Freud stated that dreams, far from being nonsense or chaotic, are highly meaningful reflections of the emotions, desires of the concern dreamer. The recent study on dream research began in 1953 when Aserinsky and Kleitman made an important observation while investigating electroencephalographic changes during sleep. Mostly everybody on this planet has a dream. In our culture, there is a belief that dreams are connected with your past and future life. Dream is nothing but recalling certain events that happen in the daytime. It is true to some extent however it is not enough to fully explain the meaning. Dreams are impactful to some extent and they influence our life.

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Sometimes dreams remove mental peace from your life and sometimes encourage us to stay optimistic towards future.

### ***Scope of Research***

Sleep and dreaming are becoming the most significant life factor for everyone. There are many factors like mental, emotional, and physical that enhance the degree of dreaming. Due to lockdown and lack of support from family and friends, the common people are facing the problem of sleep and dreaming as well. Thus, the study is extended to the dream formation process and its impacts on common people. In addition to the process and its impacts we have also taken into consideration characteristics of dream, meaning of dreams, types of dream, advantages of dream and disadvantages of dream which are affecting physical, behavioral and emotional wellbeing of an individual. This study also gives insights on control over dream, how we can remember dreams, your role in dream, body response in dream and dream and age.

### ***Objectives of Research***

- To understand the concept of sleep and dream
- To understand process of formation of dream
- To understand the characteristics of dream, meaning of dreams
- To understand the types of dream, advantages and disadvantages of dream
- To understand the control over dream, how we can remember dreams, your role in dream, body response in dream and dream and age
- To understand the how dream affecting physical, behavioral and emotional wellbeing of an individual

### ***Significance of Study:***

The World Health Organization declared the COVID-19 outbreak a global pandemic. Many of us, even those who have not been infected by the virus, will choose to quarantine in our homes. Along with the lockdown, a feeling of uncertainty and panic has also taken over among the people. The corona virus crisis and the restrictive measures that many countries are taking to contain the outbreak can have a negative impact on people's mental health and well-being. Experts agree that it is important to consider the effects of inadequate sleep and dreaming in this pandemic on the emotional and mental health of people. While providing psychological support for the general public over the sleep disorder and unnecessary dreaming is very crucial. Therefore, it is future need to focus insight on dreaming that affecting on wellbeing of common people

### ***Discussion, Analysis and suggestions: Relation between dream and sleep***

In general, any healthy person may have dreams. Dreams depend upon the physiology and psychology of a person. In the late 1960 that the relationship between sleep and memory consolidation began to be systematically subjected to experimental tests in rodents and humans. The studies concluded that sleep is a powerful learning booster (Fishbein et al., 1966). The anti-Freudian philosopher Owen Flanagan, for instance, argues that dreams cannot possibly be the result of a biological adaptation, based on his failure to recognize fitness-enhancing elements on his own dreams. In his opinion, “dreams are the spandrels of sleep” (Flanagan 2000). To consider sleep as nothing more than an opportunity for the body and mind to rest is very intuitive, since most of sleep coincides with behavioral quiescence and the slumber experience of slow-wave sleep (SWS). The typical mental content of a

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person woken up during SWS is a dark visual scene plus thoughts related to waking preoccupations (Kales et al., 1967; Fosse et al., 2004). Dreams take place only when you sleep. So the definition of sleep needs to be clarified. Every living thing on the earth goes into a state of sleep as per the anatomy and physiology of the brain. One may think that if we sleep, the brain may also sleep. But in reality, the brain never sleeps. Our mind exists in the vicinity of the brain. By the time we sleep, at that time, the thought process of the mind gradually stops. In this way the connection between the mind and the brain is broken and our routine activities are stopped. The necessary messages from the mind stop and the brain becomes a little relaxed. After this we sleep but the brain continues to function to some extent. While you are sleeping, the brain slows down its external functions. In this way, your brain goes through the stages of Non-Rapid Eye Movement (NREM) then Rapid Eye Movement (REM). Once we go through the stage of Rapid Eye Movement (REM) the dream begins.

### **NREM sleep:**

The brain switches periodically between two markedly different stages one is non rapid eye movement (NREM) and other is rapid eye movement (REM) sleep (Sapar and other 2010) which are distinguished by specific types brain activity (Zamboni and others 1999; Buzsaki and others 2013). Non-rapid eye movement (NREM) sleep has 3 stages. Stage N1 occurs right after you fall asleep and is very short (usually less than 10 minutes). It involves light sleep from which you can be awakened easily. Stage N2 lasts from about 30 to 60 minutes. During this stage, your muscles become more relaxed and you may begin to have slow-wave (delta) brain activity. Stage N3 is deep sleep and lasts about 20 to 40 minutes. During this stage, delta brain activity increases and a person may have some body movements. It is very hard to wake up someone in stage N3. So, in all three NREM sleep stages the brain, mind and body is totally relaxed and regaining energy therefore this condition is not ideal for dreaming.

### **REM sleep:**

Brain activity differs in the various sleep stages and in conscious wakefulness. Awakening from sleep requires restoration of the complex nerve impulse patterns in neuronal network assemblies necessary to re-create and sustain conscious wakefulness. Herein propose that the brain uses rapid eye movement (REM) to help wake itself up after it has had a sufficient amount of sleep. ( W.R. Klemm 2011). The rapid eye movement sleep stage occurs about 90 minutes after you fall asleep. REM sleep lasts roughly 10 minutes the first time, increasing with each REM cycle. The final cycle of REM sleep usually lasts for roughly 60 minutes. During this stage eye movement becomes rapid, breathing rate and heart rate gets increased and brain activities markedly increase. Therefore, the REM stage of sleep is ideal for dreaming.

### ***Dream formation process***

The discovery of the electroencephalographic (EEG) polymorphism of sleep through the identification of the rapid eye movement (REM) phase (Aserinsky&Kleitman, 1953; Dement &Kleitman, 1957) was instrumental to the parallel development of two trends in psycho physiological research. When we sleep, the connection between the thought centers, memory center and emotion center in our brain is temporarily stopped. To some extent the neurotic connections with the brain are temporarily disconnected. The brain uses up thirty percent of the total energy that the body produces. When you sleep the energy requirement of the brain gets reduced. The brain is a very complex organ of our body therefore it needs

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some rest to recognize and reorganize things. The mind is a superpower and very dynamic, putting continuous pressure on the brain through the thought process. So, once we sleep, we go into three NREM sleep stages. In these three NREM sleep stages the thought process of the mind completely stops and the brain achieves some rest. The NREM sleep stage usually lasts for four to six hours. When the brain gets the required quantity of sleep it slowly begins to function. When the brain starts functioning and the mind starts awakening the NRM sleep stage has started. The NRM sleep stage usually lasts for one to two hours. In this NRM sleep stage some parts of the brain regain their energy and begin to function. Since there is no active response from body parts and the brain gets confused with a partly awakened mind. They create a story of their own by recalling some of the events, characters and places they remember and the journey of dream begins. Sometimes there is no need for an NRM stage of sleep for dreams. If you are in a very difficult situation or if there is an event that has caused mental and emotional trauma, then the dreams start before the necessary rest of the brain, but such dreams are dangerous and harmful for the mental health. It makes us frustrated and due to inadequate and improper sleep the symptoms of insomnia get developed.

### ***Types of dream***

In an attempt to replicate a classificatory study reported by D. Kuiken and S. Sikora (1993), 36 volunteers (aged 18–45 yrs) reported a dream that was as impactful as their most impactful dream during the preceding month and then the 1st dream that they recalled at least 4 days later. Cluster analysis revealed 5 classes of dreams, each with a characteristic profile of emotions, goals, concerns, movement styles, sensory phenomena, self-reflectiveness, and dream endings. Four of these classes substantially correspond to the dream types identified in the original study: existential dreams (distressing dreams concerned with separation and personal integrity), anxiety dreams (frightening dreams concerned with threats to physical well-being), transcendent dreams (ecstatic dreams concerned with magical accomplishments), and mundane (unimpactful) dreams. A 5th class of moderately impactful dreams, new to this study and referred to as alienation dreams, expressed emotional agitation and concerns about interpersonal efficacy. There are various dreams like nightmares, mysterious dreams, blissful dreams, travel dreams, chase dreams, dreams of losing, dreams of success, dreams of failure, dreams of guilt, and dreams of repentance etc. We also have seen that the same type's dreams are repeated after some interval. These repeated dreams have consequences on mental health. Due to repetition in nature the people tried to sort out the meaning of it and always failed.

### ***Characteristics of dream***

Dreams have been studied from different perspectives: psychoanalysis, academic psychology, and neurosciences. After presenting the definition of dreaming and the methodological tools of dream research, the major findings regarding the phenomenology of dreaming and the factors influencing dream content are briefly reviewed. The so-called continuity hypothesis stating that dreams reflect waking-life experiences is supported by studies investigating the dreams of psychiatric patients and patients with sleep disorders, i.e., their daytime symptoms and problems are reflected in their dreams. Dreams also have an effect on subsequent waking life, e.g., on daytime mood and creativity. The question about the functions of dreaming is still unanswered and open to future research. Dreams are often completely unrealistic in nature. The mixing and matching of places and characters can be seen in dreams. Some dreams have a sound and some are silent. Some people talk in sleep known as somniloquy. However, the pronunciation is unclear and can't be understood by

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others. In your dream you feel that the event is actually happening around you. A dream story is incomplete one. Most of there is no relation between characters, events and places. The Illustration of the story of dream started on the timeline of the brain and it disappeared once it ended. The dreams never ended automatically however it ended with some external factors. The external factors are urination pressure, awakening calls from others, loud disturbing sounds, muscle pressure and fear development in dreams. There is always a mismatch between character, events and places. Lot of confusion is seen in dreams due to incomplete information recalled through the brain.

### ***Control over dream***

The present research concluded that we can control lucid dreaming in some extent. lucid dreaming the phenomenon in which a dreamer becomes aware that he or she is dreaming and can potentially exert control over the dream was a distinct cognitive state whose existence has quite a bit of scientific support. Lucid dreaming finds its strongest support yet in a study published in this issue of Nature Neuroscience, in which (Voss et al.) demonstrate that lucid dreaming can be experimentally triggered by stimulating the brain at a frequency associated with conscious awareness. Lucid dreams are believed to occur exclusively during rapid eye movement (REM) sleep, which is an active brain state that is similar in some respects to wakefulness. Usually, the REM-sleep dreamer uncritically accepts the bizarre and disjointed themes of dreams as normal. As protagonist Dom Cobb explains in the science fiction heist thriller film Inception, which was inspired by lucid dreaming. When we are awake, we are able to control the thought process and body movement to some extent however in dreams the brain has very little or no control over dreams. It's just like when you were taken to a cinema, your hands and feet tied and asked to watch a movie. So, we cannot stop or control the dream.

### ***How we can remember dream***

One challenge to our hypothesis that deserves mentioning is the fact that we do not always remember our dreams (Freud, 1900). Intrinsic and historical weaknesses delayed the spread of a sound neurobiological investigation on dreaming. Nevertheless, recent independent findings confirm the hypothesis that the neurophysiologic mechanisms of encoding and recall of episodic memories are largely comparable across wakefulness and sleep. Brain lesion and neuronimaging studies converge in indicating that temporo-parieto-occipital junction and ventromesial prefrontal cortex play a crucial role in dream recall. Morph anatomical measurements disclose some direct relations between volumetric and ultra-structural measures of the hippocampus-amygdala on the one hand, and some specific qualitative features of dreaming on the other. Intracranial recordings of epileptic patients also provide support for the notion that hippocampus nuclei mediate memory formation during sleep as well as in wakefulness. Finally, surface EEG studies showed that sleep cortical oscillations associated to a successful dream recall are the same involved in encoding and recall of episodic memories during wakefulness. Although preliminary, these converging pieces of evidence strengthen the general view that the neurophysiologic mechanisms underlying episodic/declarative memory formation may be the same across different states of consciousness. Once you started dreaming. Sometimes dreams get connected with the part of the brain where memories are stored. However, from that area one gets a very mild response to the dream. Those dreams that are connected with the memory centre of the brain are remembered by us when we are fully awake, while dreams that do not get a memory response or not get connected with the memory centre are not remembered when you are awake.

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### ***Your role in dream***

Your role is very important in the dreams or more precisely you are at the center of the dream. In a dream you are never given a side role or a dream never started without showing your direct and indirect involvement. If a dream has a larger effect on you and you suddenly wake up and sleep again you may experience the same dream. It just like the movie resumes after the interval.

### ***Body response in dream***

Bodily experience in dreams should be considered illusory (rather than hallucinatory) to the extent that they cannot be satisfactorily explained or fruitfully investigated by appealing to brain activity alone; rather, to wholly understand the unique phenomenology of embodied selfhood in dreams, one must understand how the brain processes real-body inputs to produce the phenomenology of embodied selfhood in dreams, and why the brain responds the way it does to external stimuli during sleep. Dreams may vary from three minutes to thirty minutes. You cannot experience two types of dreams at the same time. Generally one dream ends and another dream begins. Some times when you are running in a dream and you collapse or jump or when you face a dangerous situation in dream. Your body will react to it as you do in reality. The reason for this is that even if such an event occurs in a dream, the message is transmitted to other organs of the body through nerves. It's just like some people walk in their sleep.

### ***Dream and age***

This work evaluated the association of age and dream reports. The verbal reports of 148 dreams of elderly people (M age=75.8 yr.) were compared with 151 dreams of a group of young people (M age=22.0). The dreams were analyzed according to the Jungian vision (which looks at the dream as a text produced by the dreamer's unconscious while sleeping), using processing techniques derived from textual analysis. Significant differences were found between the numbers of words denoting emotion, with the young people reporting more explicit statements regarding emotional states. Significant differences were found also in use of verb tenses. When older people explicitly expressed an emotional state in a dream text, they shifted between present and past tense more frequently than young people. A significant prevalence in the semantic field of visual sense was evident as younger subjects used more sentences referring to sight than the elderly participants. The dreams are related to your REM stage of sleep. Various researches demonstrate that the amount of REM sleep is reduced by approximately 50% in late life versus young adulthood. It clearly shows that when you are at a younger age you get enough REM stage and ultimately you dream more than an adult. Another reason is why we dream more at a young age is because our brain is more active and we get enough sleep.

### ***Disadvantages of dream***

Since dreams are virtual one, they do not immediately affect real life. Memories and recurring dreams are not necessarily related to our actual way of life. However, dreams have some disadvantages like less and inadequate sleep, the REM cycle gets disturbed due to dreaming. A dream can reduce your continuous and undisturbed sleep. The dreams of losing, dreams of failure, dreams of guilt and dreams with fear will disturb you mentally. Another disadvantage of dreaming is you get depressed and anxious when you get a dream that is related to fear and uncertainties. Dreams create fear in someone's mind. People get disturb in maintaining their daily routine if they recall their dream during the day time. However, if you have dreams before the completion of sleep your mental and emotional balance gets

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disturbed. Also, if the falling dream is repeatedly stored in the memory center of the brain, your daily thinking process is disrupted.

### ***Advantages of dream***

Search activity (SA) is the behavioral and mental activity that is oriented to changes of the environment or of the subject's view and approach to the environment according to personal needs without the definite probability forecast of the outcomes of such activity, but with a regular consideration of the outcomes in the process of active behavior. Dream's lucidity (the subject's realization that he/she is dreaming) protects dreamer from awakenings during emotionally disturbing or frustrating dreams, because lucid dreams allow subject to feel separated from the dream events that may cause a feeling of helplessness. Due to such a protection from awakenings that can bring subject back to the frustration in wakefulness, subject can turn in the further sleep to normal non-lucid dreams that are restoring subject's SA in the subsequent wakefulness (activity in the uncertain situation with the feedback between behavior and its outcome). It is the advantage of lucid dreams. Their disadvantage is that due to the separation from the dream events that are in lucid dreams accepted as rationalized dreams, not as real stories where the dreamer acts like in wakefulness, their ability to restore SA is decreased until they are not displaced by the normal non-lucid dreams accepted as real stories. As such no direct advantages of dream have been seen yet by researchers. However, some dreams keep you confident and optimistic. One can get positive energy through motivational dreams. Dreams give an outline about your mental health. Some psychological therapy on mental illness based on what you see and observe in dreams. Psychologists by asking some questions on dreams are able to suggest some remedial action on physiotheraphe. Dreams give you the confidence to achieve things that seem almost impossible. Dreams keep the human mind optimistic as well as give life a meaning.

### ***Meaning of dream***

Dream interpretation during early psychoanalysis elicited associations from the patient but also involved authoritarian interpretations focused on whatever the analyst believed to be the key human drives—sex, power, transcendence, etc. Modern dream interpretation relies on non-leading questions to lead the dreamer through an associative process to discover their own meaning for the dream. Research finds that patients rate therapy sessions utilizing dreams more highly in terms of session quality, mastery, and insight gained. Everyone is always curious to find out the meaning of dreams. There was some myth in old literature regarding the meaning of dreams. Some Astrologers are claiming that they can define the meaning of dream however in modern science it is baseless. There is no meaning to dreams because they are virtually created and having no sense of sequence, places, characters and things. It is nothing but an illusion. The task of interpreting dreams and drawing conclusions is very complex, intricate and tedious. In order to make such an interpretation, the psychiatrist has to look at the dream place, dream characters, dream story, related emotions, your role in the dream is needed to relate with past life for interpretation of dream.

## **CONCLUSION**

In virtual in nature dreams do not have any direct effect on the lives of people however dreams have an indirect effect on the general wellbeing of common people. Therefore the sleep and occasionally dream formation process needs to be addressed. This paper gives insight on how sleep and dreams are correlated with each other. The dream formation process is a unique one. In NRM sleep some parts of the brain regain their energy and begin

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to function. Since there is no active response from body parts and the brain gets confused with a partly awakened mind. They create a story of their own by recalling some of the events, characters and places they remember and the journey of dream begins. There are various dreams like nightmares, mysterious dreams, blissful dreams, travel dreams, chase dreams, dreams of losing, dreams of success, dreams of failure, dreams of guilt, and dreams of repentance etc. Dreams are often completely unrealistic in nature. The mixing and matching of events, places and characters can be seen in dreams. When we are awake, we are able to control the thought process and body movement to some extent however in dreams the brain has very little or no control over dreams. However, in lucid dream the dreamer has a little control over dream. Your role is very important in the dreams or more precisely you are at the center of the dream. In a dream you are never given a side role or a dream never started without your direct and indirect involvement. Sometime body responded to dreams like jumping and walking. The reason for this is that even if such an event occurs in a dream, the message is transmitted to other organs of the body through nerves. It clearly shows that when you are at a younger age you get enough REM stage and ultimately you dream more than an adult. Another reason is why we dream more at a young age is because our brain is more active and we get enough sleep. There is no meaning to dreams because they are virtually created and having no sense of sequence, places, characters and things. It is nothing but an illusion. The task of interpreting dreams and drawing conclusions is very complex, intricate and tedious. The characteristics of dreams and their advantages and disadvantages need to be understood by common people to remove or rectify the fear of dreams and to avoid impact of dreaming on emotional, behavioral, mental and physical well being of people.

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### ***Conflict of Interest***

The author(s) declared no conflict of interest.

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