

Investigation on the Nature of Epic Dreaming: Is It Nightmare or Vivid Dream

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Abstract. Epic dreaming is a type of disturbed dreaming described as experiencing daytime fatigue after dreaming all night. To investigate whether such phenomena is simply a vivid dream or more of a disturbing nightmare, we are going to look at the physiological and psychological aspect of epic dreaming patients along the behaviors of nightmares. By comparison, we see a similarity of inclination towards objectively lighter and inefficient sleep but difference in REM sleep proportion. Additionally, neither kind of disturbed dreams are objectively affected by psychopathological influences, while both patients score relatively higher in neuroticism and openness than normal dreamers. From these common qualities, epic dreaming might not be just normal vivid dreaming but is rooted from the combination of insufficient sleep quality and subjective dream anxiety just as nightmares are. Based on these factors, future research could focus on the quantification of the subjective dream quality and subjective dream perception to explore better solution for disturbance afflicted by epic dreaming.

Keywords: Epic dreaming; Disturbed dream; PSG; Personality.

1. Introduction

We more or less dream during our sleep. Dreams are welcomed when they bring on interesting fantasies, but if the adventure just keeps going on and on from the moment you close your eyes to the moment you wake up, it may drain you out and affect your waking functioning. The population who experiences such excessive dreaming along with daytime fatigue are described as experiencing “Epic dreaming” (Schenck & Mahowald, 1955).

In the study conducted by Schenck and Mahowald (1995) from developed the concept of “Epic dreaming”, a group of 20 patients reported all-night lasting dreams about relentless activities that are often repetitive and physical, such as doing housework or endlessly walking through snow or mud (in my personal case, getting lost in familiar places). This type of excessive dreaming that follows by exhaustion in the morning occurs nightly in 90% of the affected patients. Nightmare were found comorbid in 70% of the patients. However, unlike nightmare, the contents of epic dreams are mostly neutral and can lack vivid emotions (Schenck, 1995).

The distress brought by epic dreaming impairs sleep quality by making the patients feel restless and concerned of becoming restless. A better understanding towards the features of epic dreaming, its potential relationship with nightmares, and the difference between the patients’ dream quality and dream anxiety may help us discover a way to treat this disturbed dream.

This paper is going to briefly investigate the tendency of epic dreaming: is it more of an emotionless nightmare, or just an exaggerated normal dream? We will look at the physiological and psychological characteristics of different types disturbed dreams and attempt to explore the nature of epic dreaming. Building on to the existing literature, we would look at necessary measures such as quantification of dream measures to further break down epic dreaming for possible future improvement of the distress in patients. First, we can look at the physiological bases of epic dreams and nightmares.

2. Physiological characteristics of disturbed dreams

Disturbed dreams are a problem as they impair our sleep quality and cause waking distress. Looking at the Polysomnography (PSG), sleep architecture, and waking pathology of epic dreaming compared to other disturbed dreams may tell us more about the nature of epic dreaming

2.1 Polysomnography

Polysomnography refers to the recording of various physiological processes including eye movements, brain waves, heart rate, and respiration throughout the night for the diagnosis of sleep-related disorders (American Psychology Association, 2022).

Through comparison, similar trends of PSG behavior between epic dreaming and nightmare are lower sleep efficiency, increased waking time after sleep onset, and reduced percentage of slow wave sleep. All these qualities points to a lighter sleep. One difference in sleep structure is present in the duration of REM sleep, in which has lower proportion in epic dreaming patients and longer proportion in nightmare patients.

In an epic dreaming study conducted in Taiwan by Shih-Wei Lu and his team (2010), polysomnography of in total 23 epic dreaming affected patients were recorded. Among the 23 patients, 7 were with sleep disorders (e.g., OSA, PLMD), 6 with psychiatric disorder (e.g., MDD, general anxiety), 5 comorbid with both sleep and psychiatric disorder, and the rest 5 with only epic dreaming. The study was run with a control group which excluded any participants with abnormalities with sleep. The team found that the epic dreaming group has significantly longer sleep latency (time it takes to fall asleep), percentage of stage 1 sleep, and wake time after sleep onset (WASO) than the control group. Moreover, they also have significantly lower sleep efficiency and percentage of stage 3/4 sleep than the control group (Lu, 2010).

This difference in sleep structure between two groups was consistent with the study conducted by Shih-Bin Yeh and his team (2000) in Taiwan. Observing 28 healthy patients (21.4% had sleep fragmentation disorders), the same shift towards light sleep with decreased percentage of stage 3/4 and REM sleep was found in all 28 patients, along with a modestly increased number of WASO. But they did not find any significant abnormality from the patients' total sleep time and sleep efficiency. Yeh (2000) and Lu (2010) both suspected that this trend of light and abrupt sleep in epic dreaming patients might have to do with their sense to all-night dreams. Usually, even if we dream during our sleep, we forget them due to the suppression of memorization during sleep; but in the case of epic dreamers who may possess lighter sleep may experience more awakenings right after dreams (Yeh, 2000). As more than 50% of awakenings from the NREM sleep are accompanied by dream recall, epic dreaming could be "a disorder of exaggerated NREM dreaming which, when paired with REM dream recall, would result in the perception of relentless dreaming throughout the night" (Lu, 2010).

Due to the high percentage of comorbid cases with nightmares, the PSG of nightmare patients may give us some insight of the nature of epic dreaming. In Hungary, Péter Simor and his team (2012) conducted a study on 17 patients with nightmare complaints and without any prior neurological, psychiatric, or sleep disorder. The research team found worse sleep quality, reduced sleep efficiency, increased WASO, and reduced percentage of slow wave sleep (SWS; stage 3/4 sleep) in nightmare patients. Additionally, longer sleep latency, increased proportion of stage 1 sleep, and increased awakenings in stage 2 sleep was also observed. This general trend of impaired sleep continuity with longer stage 1/2 sleep and shorter stage 3/4 sleep aligns with the sleep structure of epic dreaming. The only difference would be that instead of reduced REM sleep in epic dreamers, the nightmare patients experience slightly longer durations of relative REM sleep.

2.2 Sleep disorders and Waking pathology

In addition to the regular sleep performance monitored by the PSG, epic dreaming is also potentially mediated by sleep disorders and waking pathology through their influence to sleep structure and sleep quality. As mentioned above in Lu's study (2010), 78% (18/23) of the participants accompanies some sort of disorder (psychiatric, sleep, or comorbid with both). This could inform us how waking pathology and sleep disorders play a part in epic dreaming. In the cases of the patients with sleep disorders (12/23), problems such as obstructive sleep apnea (OSA) and restless legs syndrome (RLS) would cause continuous interruption to sleep, thus leading to the awareness towards dreams. In the cases of the patients with psychiatric disorders (11/23), their sleep includes characteristics such as increase of sleep onset, increase of WASO, decrease in sleep efficiency,

shortened REM sleep latency, and increase of REM sleep deprivation. These WASO would also increase the patients' conscious level and allow them to more frequently notice their dreams (Lu, 2010). Previous studies (Solms M, 2009) also reported epic dreaming found in patients who experienced brain lesion or just cut off from psychiatric medicine such as serotonin reuptake inhibitors. Despite cases with abnormal physiological conditions, it should be noted that epic dreaming still happens on physically healthy individuals. (Lu, 2010)

3. Psychological characteristics of disturbed dreams

Other than the physical conditions of patients, their psychological states may also play a part in contributing to their disturbed dreams. Many of the disturbed dreams are related to the person's psychological conditions, such as anxiety or depressive mood.

3.1 Emotional pressure / affect distress

Lu (2010) was the first to bring emotional factors into the study of epic dreaming. They surveyed 19 of their 23 patients. And out of the 19 patients, 63.2% (12/19) of them had different levels psychopathological tendencies. Despite the seemingly high rate, most of the patients with severe psychological disorders are from the psychiatric group (3/4 out of the 19 patients had severe tendencies and 1/4 had moderate tendencies of psychopathology) and the comorbid group. While in the other groups, the sleep disorder group only had 2/7 participants with mild psychopathological tendencies; the epic dreaming-only group had 2/4 patients with mild psychopathological tendencies. This finding suggests that the psychopathological tendencies may not be the characteristics of epic dreaming but rather the psychiatric disorders (Lu, 2010).

The research done on nightmare with the psychological influence on such disturbed dreams had a similar result with epic dreaming. Simor's study (2011) on nightmare patients reported a trend of "increased levels of depressive symptoms and waking anxiety." Interestingly, the difference in nightmare patients' interrupted NREM sleep was found independent of the effects of the anxiety and depressive symptoms. On the other hand, the increase in REM sleep were characterized by these psychopathological symptoms. Simor suggests that these findings are possibly how nightmares are structured: "impaired NREM continuity" (physiology) and "increased REM pressure" induced by psychological factors (2011). We can see the similar inference from both epic dreaming and nightmare about how psychological mood measures isn't necessarily a representing factor of objective discontinuous sleep. However, the psychopathological influence towards subjective perception of disturbed dreams still needs more investigation.

3.2 Personality

Aside from perceived stress and depressive mood, the more inherited factors also play a role in experiencing disturbed dreaming, such as personality. The NEO Five-Factor Inventory was used in most of the related studies as a measure of their patients' personality structure. The epic dreaming patients from Lu's study (2010) were found having a significantly higher score in Neuroticism and a mild tendency in higher Openness. The trend in higher Neuroticism is also reflected in the nightmare studies. Through hierarchical regression analysis, Simon's team (2011) discovered that though perceived stress "did not predict negative emotionality in dreaming", trait anxiety (and gender) did, suggesting higher neuroticism quality in nightmare patients comparing to the control group. In a more recent study conducted by Michael Schredl and his team (2019) in Germany, their patients experiencing nightmare distress also scored higher in neuroticism and openness.

4. Conclusion and future research

By comparing the physiological and psychological characteristics of both epic dreaming and nightmare, we can see quite a few of similarities. Physiological wise, patients of both types of

disturbed dreaming shows tendencies towards lighter dreaming, potentially explaining their awareness towards the dreams. On the psychological side, psychopathological tendencies had been proposed insignificant as a characteristic of both types of disturbed dreaming; it was rather a representation of their psychiatric concerns. Nevertheless, the potential mediation vice versa remains to be discussed. With these foundations, we may proceed to investigate epic dreaming in ways similar to nightmares while still keeping an eye on the different behavior and emotional infliction between the two disturbed dreams.

The previous studies of epic dreaming focused more on the objective measures such as PSG and objective sleep quality, while the patients' perception of the dreams wasn't quantified and analyzed. We know that epic dreamers' dreams are generally described as "lack of emotions" compared to nightmare patients, but does that make epic dreams less negative than nightmares? Is there a characteristic in epic dreams that particularly made the patients feel worn out along with the objective lighter sleep they get? The difference of such perception between different culture is also worth exploring. While Schenck and Mahowald's patients from American (1995) reported that their source of fatigue came from the restless movements they practiced in their dreams, Yeh's patients from Taiwan (2000) attributed their perceived fatigue as the result of their brain not able to rest at night due to continuously creating dreams.

To better understand how the more subjective perspective of dreams interacts with the objectively deduced sleep quality, we may look at the concept that Simor used in his dream studies, in which disturbed dreaming is seen as a crossover of 1) negative dream quality, "characterized by unpleasant dream and with or without awakenings" and 2) dream anxiety, which refers to "waking emotions and cognitive dysfunctions provoked by negative dream experiences". Looking at the measures of epic dreamers' negative dream quality and dream anxiety, we would be able to tell whether epic dreams are dreams with negative dream quality (nightmare) perceived with less dream anxiety (lack of emotion), or dreams with neutral dream quality (vivid dreams) that are perceived in a more extreme way with dream anxiety. Quantified tests and surveys around psychological conditions and dreams should all be taken to analyze which factor (quality or anxiety) contributed more to the distress that the epic dreamers experience. The psychological tests such as Spielberger State Trait Anxiety Inventory (STAI), Perceived Stress Scale (PSS), and Beck Depression Inventory may tell up the nature of the population. We are already aware that the psychological state may not have much to do with the objective sleep interruption, but after measuring the states along with Dream Quality Questionnaire (DQQ) and Van Dream Anxiety Scale (VDAS), we would be able to analyze its contribution or absence in how epic dreamers have and perceive dreams. All the surveys shall be adapted to wherever the study is conducted.

On top of the psychometrics, the affective dysregulation that happens in nightmare patients may also be tested on epic dreamers. Sleep diaries can be introduced into the studies to help track the epic dreamers' feelings before and after perceiving epic dreams to discover potential patterns of abnormalities in affective regulations. Activities of the brain, especially amygdala that plays a big role in emotion regulations may also be speculated to see whether epic dreams truly differ in its negative quality or does it have more to do with the dreamers' perception. Again, culture and gender factors shall be considered in analyzing the results.

Differentiating the quality and distress perceived by epic dreamers may better inform us whether the subjective perspective of the dreams makes it different from the nightmares, which shares quite similar absorbance in sleep structure. It is likely that epic dreams are also outcomes of the abrupted sleep across unsettled dream induced by either outsourced or trait anxiety. Having a better of the role of mood, emotions, and perception in epic dreaming may give us an enhanced picture of the dream spectrum, finding a better way to reduce all dreamers' distress.

Overall, through the distinctive physiological and psychological behavior of epic dreaming, it is likely not just typical vivid dreams but rather disturbing and potentially chronic like nightmares. We may further investigate the relationship between the two disturbed dreams by looking at how subjective emotions and perception of dreams presents in epic dreaming patients.

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