Effects of Dreams on Behaviour

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ABSTRACT

The current research employed the MADRE dream questionnaire to explore potential connections between dreaming characteristics and waking behaviors and personality traits. The MADRE evaluates various aspects of dreaming such as recall frequency, emotional intensity, incorporation of dream content into daily life, lucid dreaming prevalence, attitudes towards dreams, and overall dream vividness. Participants also completed the Adult Behavior Checklist, which measures an array of behavioral tendencies. Analyses revealed significant positive correlations between highly vivid, impactful dreaming experiences and traits such as openness to new experiences and creativity. Frequent nightmares were associated with lower levels of emotional stability. Notable gender differences emerged, wherein females reported more intense dreaming experiences that showed stronger links to waking behaviors compared to males. The findings suggest that particularly salient, emotionally-evocative dreams may facilitate personal growth, creative expression, and certain patterns of waking behavior. Implications related to utilizing dreams in therapeutic interventions and understanding mind-behavior connections are discussed.

Dreams: What Are They?

Dream research is an exciting field of study that illuminates the complex brain and cognitive processes that take place while we sleep. Reputable dream theories have been developed to account for the phenomenon of dreaming. Views derived from psychoanalytic theory and shaped by Freudian concepts contend that dreams serve as a window into the unconscious mind where suppressed urges, cravings, and desires are acted out. According to cognitive theories, dreaming serves as a mechanism for processing emotional information from waking life, consolidating memories, and incorporating new experiences into preexisting patterns. Many theories make an effort to explain why humans dream:

Wish Fulfillment (Freudian Theory)

Wishes, motivations, and desires that are suppressed and unable to be expressed in waking life are expressed by the unconscious mind through dreams.

Memory Consolidation

Dreams aid in the processing, integration, and long-term storage of day-to-day experiences and   memories.

Threat Simulation

Dreams provide a safe haven where we can rehearse our evolutionary defense mechanism of reacting to threats.

Brain Activation

Dreams are just the product of random neuronal activity in the brain during REM sleep, and they have no specific function.

Emotional Regulation

Dreams assist individuals in processing and regulating the emotions they encounter during the day, thereby assisting them in maintaining emotional equilibrium and well-being.

Although opinions vary, the majority of researchers think that dreams have a variety of functions that are connected to memory, controlling emotions, solving problems, and processing day-to-day experiences. Dreaming is an individual phenomenon that can only be accessed if the dreamer remembers the dream experience when they awaken. Dreaming is a subjective experience that happens during sleep (Schredl, 2010a). Apart from dream memory, there are a plethora of other factors, including attitudes toward dreams, the frequency with which dreams are shared, reading dream literature, the effects of dreaming on the waking life that follows, and, of course, typical dream features and dream content. When a dream experience is coupled with distinct perceptual and emotional content, such as feelings, images, and thoughts, it can be a series of experiences that are remembered and expressed during waking hours.

Background and Significance:

Dreaming could be a universal human experience that has always piqued the interest of scholars, rationalists, and societies. Dreams are acknowledged to support essential mental

functions, including passionate planning, memory fusion, and creative problem-solving, rather than being merely detached byproducts of sleep (Hartmann, 1996; Stickgold & Walker, 2007; Barrett, 2001). Despite the fact that dreaming is common, there is a great deal of variability in people's dream experiences, including differences in review frequency, enthusiastic, focused, and clear imagining (mindfulness of imagining while envisioning), as well as the integration of dream content into everyday life. It is important to comprehend these dream measurements and patterns because they may provide tidbits of information about cognitive forms, passionate control, and even personal development (Bulkeley, 2016; Malinowski & Horton, 2015).

Nevertheless, it has proven to be a significant challenge to effectively analyze and assess these intricate dream experiences, highlighting the need for thorough, consistent evaluations.

Research Gaps and Objectives:

Numerous studies have examined different aspects of dreaming, including the neurobiology of REM sleep or the connection between psychopathology and bad dreams (Siclari et al., 2017; Picard-Deland et al., 2021). However, there is still a dearth of research on the multifaceted nature of dreaming encounters within a single system.

The main goal of this study is to use a validated, multidimensional instrument to thoroughly assess and compare dream features, behaviors, and encounters across various bunches (e.g., gender, age). We specifically highlight the need to investigate possible group differences in dream recall frequency, emotional valence, lucid dreaming, attitudes toward dreams, and the possible effects or integration of dream content into waking life.

Introduction to the MADRE Questionnaire:

A thorough self-report tool designed to assess various perspectives on encounters is the Mannheim Dream Questionnaire (MADRE) (Hinrichs, 1989). Counting dream recall frequency, emotional intensity of dreams, nightmare characteristics, lucid dreaming experiences, attitudes and beliefs about the meaning and significance of dreams, and the possible effects or incorporation of dream content into waking life, such as providing creative ideas, problem-solving experiences, or mood impacting, are just a few of the subscales or measurements covered by this survey.
In order to collect data that is both quantitative and subjective, the MADRE combines open-ended questions with standardized reaction scales with multiple-choice questions. Previous research has demonstrated the consistent validity and quality of the MADRE in evaluating these various dream measures. (Schredl et al., 2014; Stumbrys et al., 2014).

Significance of the Current Study:

Taking advantage of the comprehensive and multifaceted nature of the MADRE, this inquiry aims to add points to the literature by providing a comprehensive understanding of imagining designs and encounters over different bunches. Our findings could clarify possible disparities in dream traits, moods, and the perceived impact of dreams on reality, improving our knowledge of the role that individual factors play in shaping the envisioning experience.

Furthermore, this study may offer recommendations for individual development plans and therapeutic interventions. If specific dream metrics are associated with favorable outcomes, like improved problem-solving skills or enthusiastic control, interventions focused on cultivating these dream experiences could be investigated.

On the other hand, if dream designs are associated with mental health issues or brokenness, appropriate procedures or treatment-focused designs might be developed. This survey has been used to assess between-person variations in dream factors based on respondents' dream recall frequency as well as sociodemographic characteristics like age and gender.

It was developed by analysts to effectively investigate the intricate phenomenon of dreaming and compile quantitative data on attributes such as emotional intensity, lucid dreaming, attitudes and beliefs regarding dreams, and the possible effects or integration of dream content into waking life. The MADRE aims to provide a comprehensive, multifaceted profile of a person's unique imagining designs and tendencies.

REVIEW OF LITERATURE

An overview of recent work on the neuroscience of dreaming was presented by Schredl and Bulkeley (2019), who combined neurophysiological data with findings from phenomenological studies. They looked into the neural bases of dreaming and how that might relate to our understanding of consciousness.

A scientific model was presented by Schredl and Göritz (2018) to evaluate the consistency of dream content with waking life experiences. Their study provided a methodical framework for assessing how closely everyday activities and dream narratives align

Volkow et al. (2016) This audit examined the effects of dreams on creativity and mental processes. It carried out an extensive analysis of the effects of cannabis use on human behavior, taking inspiration and cognition into account. While the research focused on substance use, the findings highlighted the impact of external factors on inspiration and cognitive forms.

Wood and Rünger (2016) conducted a review that looked at how dreams affect the formation of habits. Their findings shed light on the psychology of habit formation. The fundamental mechanisms of habit formation and the variables influencing habitual behaviors were covered by the writers. Dreams can help form and reinforce habits because they are symbolic of subconscious thoughts and desires. Future studies examining the impact of dream content on habit formation may be a useful avenue for comprehending the behavioral consequences of dreams.

According to Ambrosio (2015), healers in ancient Greece built their practice around the idea that dreams are a window into the subconscious and made an effort to minimize psychic enduring by analyzing and interpreting dreams. These experts functioned as mirrors, reflecting the patient's internal conflict and the path toward resolution and liberation. Carl Jung's theory

that dreams serve as a link between the conscious and unconscious informed this. In addition, he mentioned that dreams can be used for other supernatural exercises and long-term prediction.

Carr, Michelle, and Tore Nealson (2015); REM dreams are more intense than NREM dreams in terms of feeling, and waking dreams stray into fantasy land. Dreams of waking are less bizarre than dreams of REM, and dreams of NREM wander off into fantasy land. Waking daydreams that stray into fantasy land have a higher tangible encounter rate than NREM dreams, but a lower rate than REM dreams. The distinctions between REM and NREM dreams at night and daytime naps are well-established; however, these comparisons are rarely made between daydreams and REM and NREM dreams during the day. 51 participants completed daytime rests (with REM or NREM awakenings) and reported on their rest dreams as well as their waking daydreams. They also provided evaluations of their peculiarity, sensory experience, and focused feeling. Compared to normal review rates for nighttime dreams (80% and 43%, respectively), review rates for REM (96%) and NREM (89%) rests were higher, suggesting an improved circadian impact. Similar to findings for nighttime dreams, all attribute evaluations were higher for REM dreams than for NREM dreams. NREM dreams were rated lower for emotional intensity and tactile involvement than daydreams, while REM dreams were rated higher for unusualness and tactile involvement. investigates the use of daytime slumbers in dreams and suggests that specific dream properties are updated and restrained by REM, NREM, and waking state devices.

Maier and Elliot (2014), This study examined the effects of color perception on people's mental processes. While the study focused on color brain research, the findings highlight the complex interplay between external shocks and mental forms. Dreams often carry unique visual symbolism, and studying how dream materials affect mental processes appears to provide useful insights into how dreams affect behavior.

According to Rani, Shobhita (2013), everyone has dreams, but very few people give them any thought. In their dreams, people experience fear, satisfaction, substance, and all other emotions. People have been searching for deeper meaning in their dreams for a very long time. Sigmund Freud made significant contributions to this field by studying dreams and how they relate to the study of the human brain. He came to terms with the fact that dreams were the mind's method of analyzing, organizing, and translating suppressed emotions, sentiments, and thoughts that the active and aware intellect was unable to recognize or deduce. An attempt was made to learn more about dreams that are cruel and why they are so in this investigation. It is based on interviews with 192 outwardly disabled people, 99 women and 93 men, who are over five years old. The subjects were interviewed at the National Establishment for the Outwardly Disabled, Dehradun, and their dreams as well as other significant information were gathered. The gathered dreams were analyzed and interpreted. Six categories were created based on the assumptions of the elucidations and the dreams.

Perogamvros, Dang-Vu, and Schwartz (2013) investigated dream recall and content in people who have trouble initiating and maintaining sleep. They also looked at the connection between dreaming and insomnia. They investigated the relationship between dream experiences and sleep disturbances.

In order to determine whether certain personality traits are linked to a higher chance of having lucid dreams, Schredl and Erlacher (2011) looked into the relationship between personality traits and the frequency of lucid dreaming.

An integrated survey of human writing was conducted by Pechtel and Pizzagalli (2011) in this journal article, Impacts of Dreams on Cognitive and Affective Function, to examine the effects of early life experiences on cognitive and affective function. The research brought to light the complex relationship that develops between early experiences and subsequent cognitive and emotional forms. This research suggests that dreams, which often mirror intuitive thoughts and emotions, could contribute to the development of cognitive and emotional abilities. Future research appears to focus on the specific content of dreams and how they might influence cognitive and affective forms.

Schredl and Hofmann (2003) looked at the relationship between dream and waking activities in a different study, assessing how much day-to-day experiences impact the themes and content of dreams.

Barrett (2007) investigated how dreams contribute to creative problem-solving in a variety of fields, using the perspectives of athletes, scientists, and artists. She talked about methods for utilizing dreams' creative potential in day-to-day living.

A summary of the scientific research on dreams was given by Domhoff (2003), who combined knowledge from content analysis, cognitive psychology, and neuroscience. He talked about the cognitive perspective on the nature and purpose of dreams.

Revonsuo and Tarkko (2002) investigate the wonder of official in dreams, focusing on the incorporation of various elements into coherent dream narratives. They look into the relationship between the collective awareness during dreaming and the peculiarity of dream images.

According to an evolutionary theory put forth by Revonsuo (2000), dreams have an adaptive purpose connected to threat simulation. He maintained that dreams developed as a defense mechanism to mimic hazardous circumstances, assisting people in anticipating and managing threats in the real world. A thorough method for content analysis of dreams was presented by Hall and Van de Castle in 1966. This method included techniques for classifying dream elements and themes. Their work served as a basis for methodical dream analysis and investigation.

According to Solms (2000), dreaming and REM sleep are not the same thing. He contends that different brain mechanisms control REM sleep and dreaming. Neurobiological evidence is presented by Solms to bolster his theory.

The emotional content of diary dreams was studied by Schredl and Doll (1998), who looked at the frequency and intensity of emotions mentioned in dream narratives that were chronicled over a long period of time. It looked at how feelings influence dream interpretations.

The parallels and discrepancies between dreaming and waking cognitive processes were examined by Kahan and LaBerge (1996). They used first-person and third-person assessments in contrast to shed light on the nature of consciousness during dreaming.

In his quantitative approach to dream analysis, Domhoff (1996) emphasized the need for a thorough examination of dream content in order to identify trends and their implications. He looked at techniques for deciphering dream reports and drawing conclusions that are relevant

A content analysis is carried out by Revonsuo and Salmivalli (1995) to investigate the occurrence and features of strange and dreamlike elements in dreams. They investigate the relevance of these peculiar elements for comprehending the meaning and imagery of dreams. In his longitudinal studies on children's dreams, Foulkes (1999) examines how themes and content of dreams change as children grow from infancy to adolescence. He talks about how a child's dreams can reveal information about their social, emotional, and cognitive growth. Hartmann (1996) presents a thorough theory that incorporates knowledge from developmental psychology, neurology, and psychotherapy to explain the nature and purposes of dreaming. According to his theory, dreams play an adaptive role in memory consolidation and emotion control.

Thomas M. (1986); Depicts a method of translating dreams that comprises a clear and compassionate comprehension of the emotions and the situation, which is thought to be the subconscious projection of the patient. Four and one fantasy land wanderoffs are taken for analysis in order to gain a thorough grasp of the events and the patient's response. An enthusiastic state is established, and the dream is realized in response to the dreamer's immediate, intense, and mental state. It is acknowledged that dreams can have a variety of intricate meanings, but these meanings should all fit within the dreamer's intense emotional state.

According to the activation-synthesis hypothesis, which was put forth by Hobson and McCarley in 1977, dreams are the result of cortical synthesis following spontaneous brainstem activation. They talked about the neurobiological underpinnings of dreaming and how that affects our comprehension of consciousness.

An arousal-retrieval model was put forth by Koulack and Goodenough (1976) to account for individual variations in dream recall. They investigated how arousal levels and memory retrieval mechanisms affect dream recall's success or failure.

Tart, C. (1972). Tart's research examines altered states of consciousness, dream counting, and implications for neuroscience and other fields. He discusses the importance of viewing dreams within the context of specific mental states.

Ben Karpman's diary (1946) included remarkably conduct-centric entries about feelings of unease, fear, and other dreams. The topic of how mishandled medications are caused by dreams was handled too safely. How the feeling that "I'm disappointed because it was just a dream" was brought on by a single enjoyable dream. This kind of thinking could lead to the use of medications to strengthen those emotions once more. Furthermore, unease dreams were discussed. How thinking "Thank God that was just a dream" can cause mental tension, unease,

and even a fear of dreams. A sleeping disorder or generalized stretchiness and uneasiness could result from this. This entire investigation was founded on an actual analysis of parents' dreams. These were examined todetermine what elements in dreams lead to which mental alter in conduct Jennings, Jerry L. (1986); this journal illustrates an approach to dream analysis that is focused on the individual. Instead of sitting down to interpret a patient's dreams according to predetermined guidelines and tactics, the specialist teaches the patient how to understand, analyze, and interpret their dreams on their own. This also included a transcript of an actual therapy session to further clarify the approach.

METHODOLOGY

Aim
To study how dreams and their analysis influences our behaviour.

Objectives
To investigate the nature of dreams and their relationship to our behavior and personality.
To research the analysis and interpretation of dreams.
To research how dreams affect behavior.
To research the clinical applications of dreams.

Hypothesis

Null Hypothesis (H0)

The waking behaviors of individuals do not exhibit any substantial variation that can be attributed to the characteristics of their dream experiences.

Alternate Hypothesis (H1)

An individual's dream experiences, evaluated using the MADRE dream questionnaire, exert a significant influence on their waking behaviors, leading to observable differences.

Participants Recruitment
Volunteers in the research were unpaid students who were at least eighteen years old. They were enlisted through a variety of channels, including friends and family and the campus of the university. There was no payment involved, so participation was entirely voluntary. All participants were informed about the purpose, goals, procedures, and security measures for the study prior to their participation. One hundred respondents completed the online survey in total. There were 50 men and 50 women in the participant group, representing an even gender split. With fifty women and fifty men, the total cohort of 100 participants had a mean age of 21.4444 years.

Research questionnaire
The questionnaire is divided into various sections or subscales, each of which includes a set of questions that concentrate on a particular facet of the dreaming experience. To collect qualitative data, it uses both open-ended questions and multiple-choice questions with consistent rating

scales (such as never, rarely, sometimes, and often). One measure uses a seven-point scale from "Never" to "Almost every morning" to assess the frequency of dream recall. Intenseness and overall tone are evaluated on a five-point scale ranging from "Very negative" to "Very positive," and intensity is measured on a five-point scale from "Not at all intense" to "Very intense." These measures are also used to evaluate the emotional qualities of dreams. Two frequency scales (current and childhood occurrence) are used to measure the frequency of nightmares. The eight-point scale goes from "Never" to "Several times a week." A yes/no question assessing recurrent nightmares connected to waking-life situations, a five-point disturbance scale, and a question regarding the percentage of recurrent nightmares are used to measure the characteristics of nightmares.

An eight-point frequency scale and an inquiry regarding the age of the first occurrence are used to evaluate lucid dream experiences. Dream-related behaviors like dream sharing, dream journaling, dream problem solving, dream interpretations that impact daytime mood, and déjà vu experiences are evaluated using a number of eight-point frequency scales. A five-point rating system was used to evaluate the inclination to read about dreams and the value of doing so. Lastly, participant agreement with statements on six five-point scales is used to estimate attitudes toward dreams.

Numerous studies have assessed the psychometric qualities of the questionnaire, proving its validity (content, construct, and criterion validity) and reliability (internal consistency and test-retest reliability) in evaluating different aspects of dreaming. The extensive coverage of various dream dimensions and the standardized response formats enhance its strong psychometric properties.

RESULT

A comparison of the MADRE dream questionnaire data between male and female participants showed some interesting differences. 59.00990099 was the average score for all participants combined. On the other hand, when the scores for each gender were broken down, it was clear that women scored higher overall (3124) than men (2836), which may indicate that men typically scored higher overall on the different aspects of dreaming that the questionnaire measured.

Additional analysis of the data supported this pattern. The average score for women (61.25) was greater than the average score for men (56.72), suggesting that women's averages were higher on all of the dream subscales. In addition, women's scores (63) had higher median and mode values than men's (56.5 and 49, respectively). These results suggest that, in all of the dreaming experience dimensions measured by the MADRE questionnaire, women consistently outperformed men. This may suggest that, in comparison to their male counterparts in the study, females self-reported more frequent dream recall, more intense dreams, more lucid dreaming experiences, stronger attitudes regarding the significance of dreams, and greater incorporation of dream content into their waking lives.
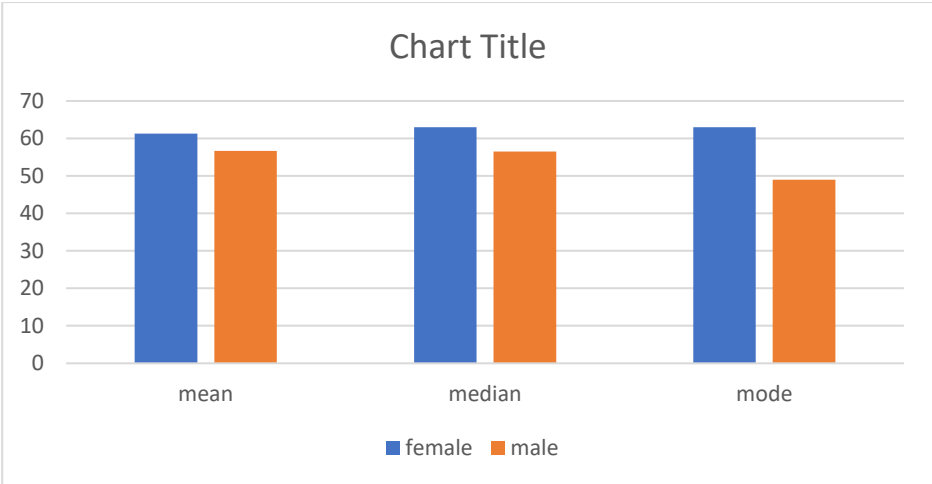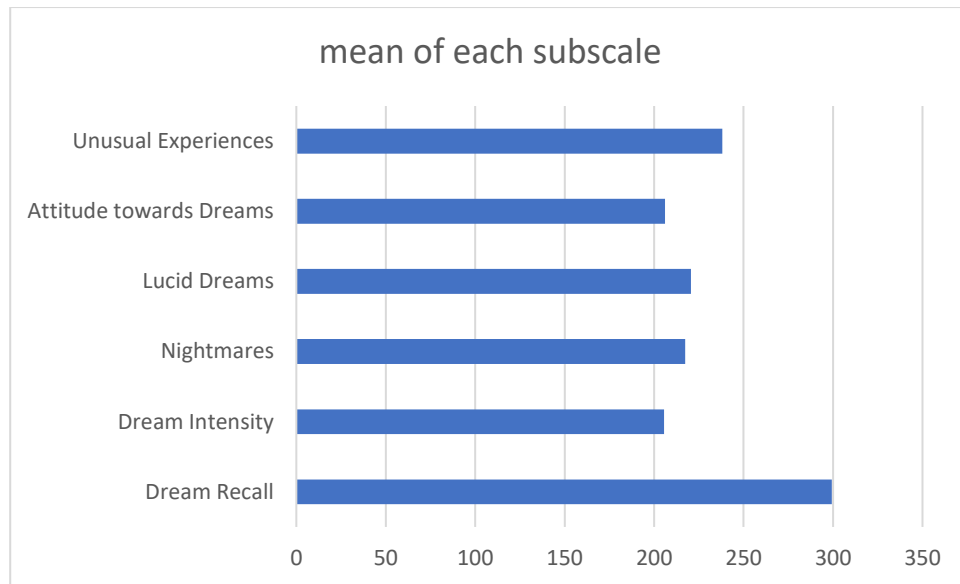
Figure 1 : Mean scores for each subscale on the MADRE dream questionnaire, separated by gender

While the summarized data clearly shows an overall higher scoring pattern for females versus males on this comprehensive dreaming assessment, it does not identify which specific subscales contributed most significantly to these gender differences. To pinpoint the specific elements of dreaming that showed the strongest gender differences, more research would be needed.

Table 1 : The mean scores for each subscale

Subscale	Mean of each subscale
Dream Recall	299.25
Dream Intensity	205.5
Nightmares	217.4
Lucid Dreams	220.5
Attitude towards Dreams	206.125
Unusual Experiences	238.2

mean of each subscale

The average or typical levels of various dreaming aspects reported by the participants are revealed by looking at the mean scores for each subscale of the MADRE dream questionnaire. The average mean score of 299.25 for dream recall frequency indicates that participants generally reported recalling their dreams quite frequently—virtually every morning. The average dream intensity score of 205.5 is in the middle of the "Not that intense" and "Somewhat intense" ranges, suggesting a moderate degree of emotional intensity overall. The average frequency of nightmares, as indicated by the mean score of 217.4, is roughly two to three times per month.

The average lucid dream score of 220.5 falls between having lucid dreams (realizing you are dreaming) roughly once a month and two to three times a month. The low mean score of 206.125 for attitudes toward dreams indicates that there was a tendency for participants to have more pessimistic views regarding the importance and meaning of dreams. Participants reported somewhat frequent unusual dream phenomena, such as déjà vu experiences, according to the highest mean score (238.2) for unusual experiences. To summarize, the data indicates the following for this sample of participants who completed the MADRE questionnaire:

1. Recalling dreams almost every morning is extremely common.
2. Dreams with emotional intensity that is moderate.
3. Nightmares that happen on average a few times a month.
4. A lucid dream occurs once every two to three months.
5. Dismissive views regarding the significance of dreams.
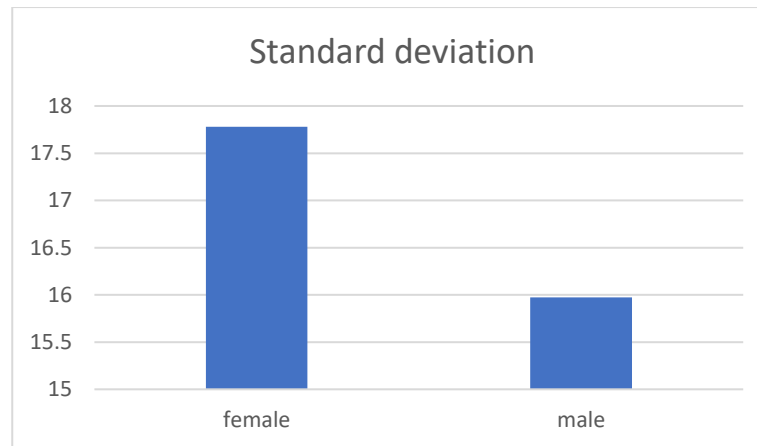6. Unusual dream experiences occur relatively frequently.

Figure 2 : standard deviations of scores on the MADRE dream questionnaire, separated by gender

The graph unequivocally demonstrates that the standard deviation for males was 15.97, while the standard deviation for females was 17.78. The MADRE dream questionnaire study's standard deviation values for men and women shed light on the distribution and variability of their responses. While a lower value indicates that scores are more closely clustered around the mean, a higher standard deviation indicates greater variability, with scores deviating more from the mean.

The standard deviation of 17.78 for females suggests that their responses varied more amongst themselves and that their scores were more widely distributed. This suggests that there was greater diversity and variability among the female participants in terms of dream experiences, attitudes, recall frequencies, and other aspects measured by the MADRE.

The lower standard deviation of 15.97 for males, on the other hand, indicates that their scores were more consistently clustered together and deviated less from the mean. This suggests that when it came to the reported dream characteristics and tendencies measured by this questionnaire, the responses from the men were more uniform or comparable to one another. The disparity in standard deviations indicates that although women showed more individual variability and heterogeneity in their dreaming patterns, men showed more consistency and uniformity in the way they described their dream experiences in this extensive evaluation.

In conclusion, the lower male standard deviation indicates greater homogeneity and consistent reporting of dream experiences within the male participant group, whereas the higher female standard deviation indicates more varied and diverse responses, reflecting individual differences in dreaming patterns.

DISCUSSION

The MADRE dream questionnaire data showed significant differences between the genders in a number of dream-related domains. In all subscales and the overall measure, women consistently scored higher than men. This suggests that women recall dreams more frequently, have more intense dreams, have more lucid dreaming episodes, and are more likely to apply dream content to their waking lives.

The higher average score for females than for males was one of the most startling findings, indicating that women generally reported more memorable and significant dream experiences. This result is consistent with other studies that found that there are gender differences in the frequencies of dream recall, with women generally reporting higher rates.

The MADRE questionnaire's item frequency distribution shows that participants used the whole range of response categories, with a considerable number of responses in each category. This suggests that measuring inter-individual differences in dreaming experiences is a good use for   the   questionnaire.

The study of gender effects for other dream variables was supported by the fact that the gender effects on dream recall frequency seen in the online sample were similar to those discovered in representative samples. Interestingly, even after statistically adjusting for nightmare frequency, it was discovered that women experienced more nightmare distress than men did. Stated differently, women tended to feel more distressed when they had the same amount of nightmares as men.

It's crucial to remember that this study was correlational in nature, which makes drawing firm conclusions about causality impossible. It is still unknown whether improved mnemonic association ability directly causes better dream recall or if both are influenced by other underlying neurocognitive factors, even though the findings point to a correlation between the two. More research on this relationship may come from manipulating memory encoding strategies in experimental studies in the future.

Notwithstanding these drawbacks, the results may be used to improve dream recall, which has been linked to a number of positive psychological and cognitive effects. Mnemonic association training programs have the potential to enhance dream recall, which could result in heightened dream awareness and self-awareness.

CONCLUSION

The MADRE questionnaire is a good tool for measuring individual differences in dreaming experiences, as evidenced by the frequency distribution of responses across the different categories. The fact that participants used the complete set of response options, with a sizable number of responses in each category, makes this clear. This work adds to the increasing corpus of research on the gender variations in dream experiences. According to the research, women report, on average, more frequent, powerful, and impactful dream experiences than do men, including greater rates of lucid dreaming and improved dream recall. But there's also more variation among women, which emphasizes how important it is to take individual variations within genders into account. Although these results are consistent with earlier research, it is important to recognize that dream reporting is subjective and that cultural and individual factors may have an impact on how people perceive dreams. Subsequent investigations may delve deeper into the fundamental neurological and psychological processes that give rise to the gender disparities that have been noted, along with the possible consequences for therapeutic approaches or individual development concerning dreams. All things considered, this research highlights how important it is to take gender into account when trying to comprehend the vast and intricate world of human dreaming.

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