

Exploring the Association Between Dreams and Personality Traits

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Abstract: This study focuses on the often-neglected aspect of 'dream attitudes,' such as participants' interest in dreams and the impact of their dreams. By examining the relationships between dreaming, attitudes toward dreams, gender, and personality traits, we aim to explore the continuity between dreaming and wakefulness from a new perspective. Specifically, we hypothesize that: (1) there are differences in dream frequency between males and females; (2) individuals of different genders and personality traits vary in their dream recall and clarity; (3) there are differences in dream attitudes and recall frequency based on personality traits. The participants of the experiment were college students, and data were collected through a specially designed dream research questionnaire. Gender and personality trait scores were used as independent variables, and dream frequency and attitudes as dependent variables, analyzed using factor analysis, correlational analysis, and t-tests. The findings suggest that individual characteristics may influence attitudes toward dreams and are possibly related to the frequency of dream recall. Future research should be more multidimensional and comprehensive, taking into account the interplay between personality traits and dream content.

Keywords: Dreaming, Dream Recall Frequency, Attitudes Toward Dreaming, Big Five Personality Test

1. Introduction

Dreams, as windows into the unconscious, have been perennial subjects of fascination in understanding human psyche and personality. Despite historical interpretations that align dreams with supernatural messages [1], contemporary research often probes into how dreams mirror psychological states.

This study seeks to bridge the gap in literature by examining college students' dreams in relation to their personality traits, particularly through the Big Five Personality framework. It investigates gender differences in dream frequency and clarity, and how these correlate with various personality dimensions. Utilizing a survey method and statistical analysis, this research intends to shed light on the complex interplay between dreams and personality, potentially informing psychological interventions and contributing to the field of mental health.

1.1. Dreams

Since ancient times, dreams have been a focal point of human interest, closely linked to religious notions of "divinity," serving as a conduit for mystical messages [2]. Dreams occupy a third of our lives, and scholars increasingly recognize that experiences related to dreams are crucial for understanding the workings of human consciousness. Dreams are both mysterious and bizarre to humanity, often deeply connected to the events of the day, conveying profound messages. With the advancement of science, the study of dreams has integrated into various fields such as psychology, philosophy, and anthropology, revealing the connections between dreams and human consciousness.

Freud considered dreams as the fulfillment of wishes, reflecting ideas typically suppressed in the preconscious mind. He proposed that personality structure is composed of the id, ego, and superego, with dreams acting as expressions of id desires [3]. Nowadays, psychologists have extensively studied dreams from various perspectives, discussing their functions and meanings.

Modern research reveals the relationship between dream content and cultural and individual backgrounds. Adler pointed out that "dreams are the factories that make emotions". According to [4], Adler states that "the human mind possesses in it all the means to complete, consolidate and strengthen his way of life, one of the most important of which is the ability to sift through emotions". He said. In other words, the Adlerists believe that dreams are a product of human life. Fromm "argues that dreams are the manifestation of all mental activity, expressing not only the same irrational demands, but also the basis of the same rationality and wisdom"[5].

On the other hand, with the development of cognitive neuroscience research techniques, many researchers have studied the neural mechanisms of the brain during dreaming and have come up with dream theories related to neuroscience, among which the "activation-synthesis" theory is represented by the "activation-synthesis" theory, which reduces dreams to the neural workings of the brain, according to [1], dreams are descriptions of a person's cognitive processes, and the scene in a dream is a concrete representation of a person's thoughts. "Dreaming" is a change in one's perception that makes one "aware". These theories attribute dreams to the functioning of the nerves in the brain. Of course, there have been many recent attempts to integrate these theories. These dream theories explain the mechanism of dreaming, the function of dreams, and the meaning of dream content from different perspectives. On the basis of the flourishing of dream theories in the academic field, we understand the differences in people's dream experience from different theoretical perspectives.

For example, dreamers in the Netherlands are more aggressive than American college students, but are relatively less physically aggressive. Swiss dreams show that they are less aggressive than American college students, especially men. [3]. On the other hand, [3] point out that "animals" do not often appear in Japanese dreams, which they believe may be related to the fact that Japanese people do not keep pets often. Secondly, Japanese men dream of "acquaintances" more often than men in other countries, and Japanese men also dream of "women" more often than men in other countries. [4] found that Chinese college students were less likely to engage in aggressive or sexual behavior in their dreams than American college students, but were more likely to see familiar characters in their dreams than American college students. This shows that dreams are not only hidden in the subconscious, nor are they just the result of random brain activity, but are a clear reflection of experiences, thoughts, and obsessions in the waking state. In addition, it can be concluded that people of different genders, cultural backgrounds, etc., have different experiences, thoughts, and obsessions, and that the content of their dreams and the frequency of their dream memories are also different.

1.2. Personality research

In the seminal work of Goldberg, [6], personality traits were distilled into five primary factors from his psychometric research and review of other studies. He dubbed these the "Big Five." Following

this, Costa, P.T. initially had three factors, but later expanded this by adding two additional factors, developing the "Revised NEO Personality Inventory." This instrument posited that personality is composed of five factors, termed the "Five-Factor Model"[7]. These five factors are: Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience.[8] defines personality as a psychological construct that describes an individual's emotional, cognitive, and behavioral characteristics across different contexts and times [5] further elucidates that consciousness is part of the vast spectrum of human life activities, and within the broader framework of unconscious activity, there are subtle changes that go unnoticed, with personality being one of these unconscious processes. Thus, an individual's personality is shaped by a combination of unconscious information processing and the diversity of their cultural background, social experiences, and thought processes. As research shows, people of different genders and cultural backgrounds differ in their dream content and recall frequencies, which also reflects their personality traits, in turn affecting their attitudes towards dreams, recall frequencies, and clarity of memory.

1.3. Research Purpose and Hypothesis

Dreams are often considered to be unconscious activities during sleep, unique to the individual, and reflective of the deeper unconscious mind. Freud posited that dreams are a part of the conscious mind within a broader framework of consciousness. Personality, then, is seen as an integration of unconscious information processing and individual diversity. The aim of this study is to explore whether an individual's self-perception, or personality, can be deepened by understanding their dreams.

The Big Five Personality Test, used in this paper, is one of the most authoritative models in personality assessment. This study focuses on 'attitudes towards dreams,' an aspect often overlooked in dream research, such as the interest in and impact of dreams on individuals. By examining the relationships between dreams, attitudes towards dreams, gender, and personality traits, we seek to investigate the continuity between dreaming and wakefulness.

Accordingly, we hypothesize that: (1) there is a difference in dream frequency between males and females; (2) individuals of different genders and personality traits vary in their recall and clarity of dreams; (3) there are differences in attitudes towards dreams and the frequency of dream recall based on personality traits.

2. Method

The study sample consisted of 167 valid participants out of 173 male and female students at University A, excluding those with incomplete questionnaires (average age: 23.26 years).

Independent variables included gender and personality trait scores, while the dependent variables were the scores for dream frequency and attitudes towards dreaming. The research method employed was a questionnaire survey, with a questionnaire titled "Survey on Dreams." The questionnaire was divided into three parts: (1) Personality traits, referring to the Japanese abbreviated version of the Big Five Personality Test, covering five dimensions: neuroticism, extraversion, openness, agreeableness, and conscientiousness; (2) Dream recall frequency and clarity of dream memory, measured on a five-point scale ranging from "less than once a month" to "almost every day," and from "I do not remember if I dreamed" to "I can remember almost all details of the dream;" (3) Attitudes towards dreams, scored on a four-point scale based on an 18-item questionnaire by [9], encompassing "meaning and effective use of dreams," "value of dreams," and "influence of dreams." **Section Titles**

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3. Results

3.1. A Factor Analysis of the 'Dream Attitude Scale'

Initially, a factor analysis was performed on the "Attitudes towards Dreams" section of the questionnaire. Utilizing the 18-item "Dream Attitude Scale" developed a principal component analysis was conducted. After a varimax rotation and excluding items with factor loadings below 0.35, three principal factors were extracted, explaining a total variance of 53.1%, with each factor having an eigenvalue greater than 1.58. Based on the content of the items within each factor, the first was named "Significance and Effective Use of Dreams," the second "Value of Dreams," and the third "Impact of Dreams." (Table 1)

Table 1: Results of the "Attitude to Dreams Scale" Factor Analysis

	Dream value	Influence of dreams	The Significance and Effective Use of Dreams
Factor 1: The Value of Dreams			
I think dreams represent a person's personality	0.754		
I think dreams represent our subconscious mind.	0.724		
I believe that dreams are a reflection of one's feelings and psychology at that time	0.678		
I believe that by understanding dreams, we can make a person's life better	0.654		
I think you can know yourself through dreams	0.612		
I think dreams are useful when creating works of art, such as poetry and painting.	0.512		
I like to dream	0.439		0.396
Factor 2: Influence of dreams			
Dreams affect your work and studies		0.837	
Your mood is affected by the dreams you have		0.814	
I think dreams are useful when creating works of art, such as poetry and painting.		0.799	
Dreams can affect self-esteem		0.719	
Sometimes I think about the dreams I had		0.611	0.323
Factor 3: Significance and Effective Use of Dreams			
I don't think there is any intention in dreams.			-0.773

Table 1: (continued).

For me, everyday life is everything, and I don't need dreams		-0.688
I don't think there is any intention in dreams.		-0.647
I want to better understand my dreams.	0.464	0.616
I think dreams are very important	0.338	0.614
Sometimes I try to remember my dreams.		0.598

Method: Principal Factor Method Rotation Method: Varimax Rotation

3.2. A Correlational Analysis

In order to further analyze and evaluate the correlation between the three dimensions of "Attitudes towards Dreams" and the frequency of dream recall as well as the clarity of dream memory. The results indicated a negative correlation between the "Value of Dreams" and frequency of dream recall ($r=-.206$). All factors were negatively correlated with the clarity of dream memory, with coefficients of $r=-.213$, $r=-.208$, and $r=-.225$, respectively. (Table 2)

Table 2: correlation analysis of Attitudes towards Dreams and frequency and dream memory

			Factor1	Factor2	Factor3	frequency	dream memory
Spearman Rho	Factor 1	correlation coefficient	1			-.206**	-.213**
	Factor 2	correlation coefficient		1		0.005	-.208**
	Factor 3	correlation coefficient			1	118	-.225**
							N=167

3.3. A Comparative Analysis of High and Low Scorers on Big Five Traits

To examine whether varying levels of personality traits exert different effects on the three elements of dreaming, we calculated the total scores for the ten Big Five personality traits and derived the average for each of the five traits. Participants with scores above the average were categorized into the high score group (H group), and those with scores below the average were placed in the low score group (L group). This segmentation facilitated the discussion of differences between these two groups. T-tests were conducted for each personality trait of the H and L groups and the three dreaming factors (including gender differences, personality traits related to dreaming, and attitudes towards dreaming) between the two groups.

Tables 3 indicate scores for neuroticism (H group=90, L group=77), honesty (H group=110, L group=57), openness (H group=78, L group=89), extraversion (H group=73, L group=94), and agreeableness (H group=90, L group=77).

Furthermore, in the t-tests between dream valuation and the five personality factors, only neuroticism and honesty showed a p-value of 0.05, indicating a difference. In other words, stronger tendencies towards neuroticism and honesty correlate with a stronger valuation of dreams. For traits other than neuroticism and honesty, p-values were greater than 0.05, meaning no statistical differences in personality traits between the H and L groups were observed.

Table 3: Personality traits and "attitude towards dreams" T-test

Personality traits and "attitude towards dreams" T-test															
	Neuroticism			Conscientiousness			Extraversion			Agreeableness			Openness		
	H = 90,L = 77			H = 110,L = 57			H = 73,L = 94			H = 90,L = 77			H = 78,L = 89		
	average value	t	P	average value	t	P	average value	t	P	average value	t	P	average value	t	P
Value of Dreams	-0.13	-1.89	0.05	-0.1	-1.96	0.05	0.01	0.08	0.93	-0.44	-0.62	0.53	0.007	0.08	0.93
	0.15			0.2			-0.01			0.051			-0.006		
The Significance and Effective Use of Dreams	0.3	0.42	0.67	-0.02	-0.42	0.67	-0.06	-0.74	0.46	-0.013	-0.19	0.84	-0.065	-0.74	0.45
	-0.35			0.46			0.05			0.016			0.051		
Influence of dreams	-0.08	-1.14	0.25	-0.01	-0.06	0.94	-0.01	-0.02	0.99	0.005	0.07	0.99	-0.001	-0.02	0.99
	0.09			0.01			0.01			-0.005			0.001		

3.4. Investigating the Frequency and Clarity of Dream Recall Among Different Genders

Initially, upon comparing the dream recall frequency between genders, it was found that males and females provided distinctly different responses to the same question regarding how often they dream.

When asked about the frequency of their dreams, the highest proportion of females reported dreaming "almost every day" (45%). This was followed by respondents who dream "1-2 times a week," accounting for about 30%. Those who dream "3-4 times a week" ranked third at approximately 20%. The least likely scenario for females was dreaming "less than once a month," with less than 10% stating they dream that infrequently.

Subsequently, when males were questioned about the extent of their dreaming, the percentages across the five options for dream recall frequency were all below 20%. The most common response was "dreaming 1-2 times a month." Those who dream "almost every day" and "1-2 times a week" each made up about 15% of the total. The fewest respondents dreamt "less than once a month," aligning with the results obtained from females.

In summary, two conclusions can be drawn: (1) Many individuals, regardless of gender, dream at least once a month. (2) Females are more likely to dream at any given frequency compared to males.

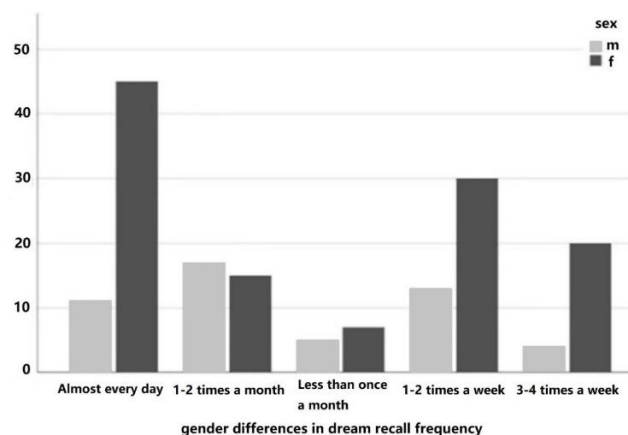


Figure 1: Gender differences in dream recall frequency.

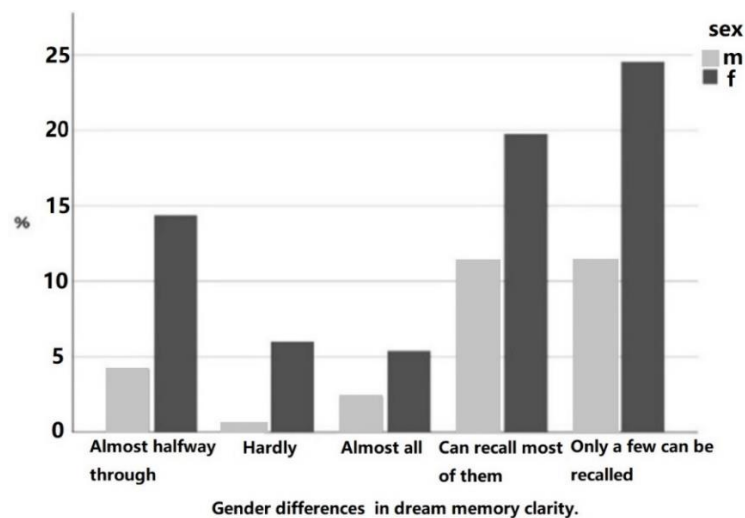


Figure 2: Gender differences in dream memory clarity.

4. Conclusions

This paper focuses on a thematic study of college students' dreams and personality traits, utilizing a combination of case study analysis and literature review. Case study analysis is favored for its simplicity and rapid conclusion generation, although its conclusions lack generalizability. Literature review, on the other hand, offers a comprehensive quantitative analysis but may not fully reveal typical features of dreams and personality.

The findings are as follows: 1. Bar charts (Figures 1 and 2) were used to study gender differences in dream recall frequency and dream memory clarity. The results indicate that females dream more frequently and have clearer memories of their dreams than males. 2. An analysis of the correlation between personality traits and attitudes towards dreams showed no significant association across the three dimensions of dreaming. 3. Data analysis concluded that higher tendencies of neuroticism and conscientiousness correspond to a greater recognition of the value of dreams.

Overall, this study is limited to the student population at University A, presenting certain constraints regarding age, life experience, and personal background. Dreams and personality are closely related to an individual's environment, education level, and experiences. This research was mainly a survey of phenomena, lacking an in-depth analysis of dream content. Future studies should more comprehensively explore college students' dreams from various perspectives to analyze the characteristics and mental health status of new-era students, which is of significant value to the development of psychological health education. Further research is needed to identify dream indicators related to mental health and to apply the findings to psychological counseling and clinical practice.

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