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Assessing Various Aspects of Dreaming in Young-Adults

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ABSTRACT
This study analyses various dream related aspects as experienced by young adults and explores any gender differences. The Mannheim Dream questionnaire (MADRE) developed by Schredl et al. (2014) was used to conduct a survey on a sample of 60 college going students which consisted of 22 males and 38 females. Using this questionnaire various aspects of dreaming were measured like dream recall frequency, emotional aspects of dreams, nightmares, lucid dreaming, attitude towards dreams, effects of dreams on waking life and dream literature. The results of the study were then compared with previous findings to find out how this study that is conducted on an Indian sample compares with previous studies on other population groups. The key findings of this research show that while females scored higher on dream recall, dream telling and dream recording frequency, males scored higher on general attitude towards dreams and reading dream literature.

Keywords: dream frequency, dream interpretation,nightmares, lucid dreaming, dream literature

Assessing Various Aspects of Dreaming in Young-Adults

The dream experience is a sequence of sensations, images, emotions and thoughts that can be recalled and expressed during wakefulness, especially when this experience is accompanied by vivid perceptual and emotional content, such as a high degree of bizarreness. APA (American Psychological Association) defines dream as a physiologically and psychologically conscious state that occurs during sleep and is often characterized by a rich array of endogenous sensory, motor, emotional, and other experiences. Dreams occur most often, but by no means exclusively, during periods of REM sleep (APA Dictionary of Psychology, n.d.).

Since the discovery of REM sleep, scientific knowledge on the relationship between dreaming and physiological measures including brain activity has accumulated.Several theories have been formulated over past decades that attempt to explain dreaming, including those that assign specific functions to this process (as opposed to REM sleep) that include its potential role in emotional regulation. Due to its subjective nature, dream experience is inaccessible to objective instruments but it can be indirectly assessed by self-report measures such as questionnaires or diaries. Collecting information on dream experiences and beliefs from large cohorts is therefore an important resource for investigating the role of sociodemographic and cultural variables in the dreaming process, dream perception and dream interpretation. In particular, such epistemological studies should help advance understanding of the extent to which sociodemographic factors are correlated with dreaming, thereby allowing theories to integrate these variables in their formulation of dream functions. Through large-scale questionnaire studies, several variables such as age, gender, and personality have been linked to dream characteristics.

As dreaming occurs at a very individual level which can be interpreted only when one can recall it in the awakening stage, therefore, studying dream recall, measuring dream recall frequency using questionnaire is a major topic in dream research analysis. Besides this there are other aspects to dreaming like attitude towards dream, frequency of telling dreams, reading dream literature, the effect of dreaming on waking life and the types of dream topics/dream content.

Nightmares

Nightmares are dreams with strong negative emotions that result in awakening from the dreams. Dream plot can be recalled very vividly

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upon awakening. Nightmares can create feeling of terror, anxiety or despair and lead to psychological distress or sleep problems like insomnia.

Lucid Dreams

In a lucid dream, one is aware during the dream that one is dreaming. Thus, it is possible to wake up deliberately, or to influence the action of the dream actively or to observe the course of dream passively.

Déjà vu

During this experience one is convinced one is reliving real life situation that was already experienced in a dream. It is not only a feeling of familiarity, but also the metacognitive recognition that these feelingsare misplaced.

Methods

Participants

A sample of 60 participants was chosen from college going under graduate and post graduate students aged between 18-26 years, out of which 38 were female and 22 were male participants.They were invited to participate in the study after college hours. They responded to the invitation and appeared to take the test by their own interest and free will.

Measures

This research uses the Mannheim Dream questionnaire (MADRE) developed by Schredl et al. (2014). It is a comprehension instrument that evaluates dream recall frequency, emotional aspects of dreams, nightmares, lucid dreaming, attitude towards dreams, effect of dreams on waking life and dream literature. All these topics have used different types of scales such as a 7-point scale, 5- point scale, 8- point scale etc.

Procedure

The research was conducted in a questionnaire survey format in offline mode. Potential participants were invited to participate in the survey. All participants were informed in advance regarding the topic of the research and were told that the survey concerned student's general knowledge about their dreams and the types of dreams they undergo. Proper instructions were given about the questionnaire that was used such as it would take about 25-30 minutes to complete it. All participants were assured about the confidentiality of their data before beginning the test.

RESULTS

A gender wise distribution for dream recall frequency is depicted in Table 1. 78.1% females have reported recalling their dreams in recent times more than once a month while 63.6% males reported the same. 36.8% females reported recalling their dreams almost every morning and only 2.6% reported never having recalled their dreams in the recent times. As opposed to this 31.8% males reported recalling their dreams almost every morning and 22.7% reported never having recalled their dreams in the recent times.

Table 1
Dream Recall Frequency

Category	Male (N=22)	Female (N=38)
Almost every morning	31.8%	36.8%
Several times a week	13.6%	23.7%
About once a week	18.2%	2.6%
About 2 to 3 times a month	4.5%	15.8%
About once a month	0%	10.5%
Less than once a month	9.1%	7.9%
Never	22.7%	2.6%

The emotional intensity and emotional tone of the dreams were also measured on 5-point Likert scales. The mean score for emotional intensity on a scale from 0 to 4, for males was 2.00 and for females 2.08. For the emotional tone of the dreams the mean score on a scale from -2 to 2 were found as 0.50 for males and 0.11 for females. A t-test analysis was run and the mean difference was found not statistically significant at .05 level of significance (see Table 2).

Table 2
Emotional Intensity and Emotional Tone of Dreams by Gender

Variables	Female		Male					
	M	SD	M	SD	df	t	p	Cohen's d
Emotional intensity	2.08	1.28	2.00	1.45	39.74	0.21	.83	0.06
Emotional tone	0.11	0.83	0.50	0.74	48.28	-1.90	.06	0.50

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Note. Due to unequal sample sizes Welch's t test was used for both variables. Gender difference for Emotional intensity and Emotional tone are found not statistically insignificant at .05 level of significance. The effect size is small for Emotional intensity and moderate for Emotional tone.

A gender wise distribution for nightmare frequency in the recent times is depicted in Table 3. No major differences were observed. 31.6% females reported having nightmares more than once a month in recent times while 27.2% males reported the same. The level of distress due to nightmares was measured using a 5-point Likert scale. The females on a scale from 0 to 4, scored a mean score of 1.58 while males scored 1.50. A t test analysis was performed and the mean difference was found not statistically significant at .05 level of significance.

Table 3
Nightmare Frequency by Gender

Category	Female (N = 38)	Male (N = 22)
Several times a week	13.2%	13.6%
About once a week	10.5%	4.5%
Two to three times a month	7.9%	9.1%
About once a month	10.5%	9.1%
About two to four times a year	10.5%	18.2%
About once a year	26.3%	13.6%
Less than once a year	10.5%	13.6%
Never	10.5%	18.2%

Table 4
Level of Distress From Nightmares by Gender

Variable	Female		Male				
	M	SD	M	SD	t	p(42.04)	Cohen's d
Level of distress	1.58	1.27	1.50	1.34	0.23	.82	0.06

Note. Due to unequal sample sizes Welch's t test was used. Gender difference for Level of distress is found not statistically insignificant at .05 level of significance. The effect size is small.

The sample group's current nightmare frequency was correlated with childhood nightmare frequency and lucid dreaming scores using Pearson coefficient correlation (see Table 5). The results showed a significant positive correlation at .01 level of significance between current nightmare frequency and childhood nightmare frequency scores, $r(58) = .48$, $p < .01$. There was also a significant positive correlation between current nightmare frequency and lucid dreaming scores at .05 level of significance, $r(58) = .30$, $p = .019$.

Table 5
Mean, Standard Deviation, and Pearson Correlations Between Current Nightmares, Childhood Nightmares, and Lucid Dreaming

Variables	M	SD	1.	2.	3.
1. Current nightmares	3.80	2.29	-		
2. Childhood nightmares	3.47	2.33	.48**	-	
3. Lucid dreaming	3.00	2.27	.30*	.33*	-

Note. *p < .05, **p < .01

Participants on average reported 25% of their dreams as recurrent ones. Males on average reported 23% and females on average reported 28% of their dreams as recurrent. Moreover, on being asked if they were experiencing recurring nightmares related to a situation from their waking life 55.3% females answered as yes while 45.5% males answered affirmatively.

The general attitude towards dreaming was measured by eight dream related statements on a 5-point Likert scale. The statements were related to subjective meaning-attribution to dreams, interest in dreams and impact of dreams in one's life. On a scale from 0 to 4 females on average scored a mean score of 2.36 while for males, mean was 2.57.

Moreover, we also see that females on average preferred to tell their dreams to others

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more frequently than males. 39.5% females reported telling their dreams to others more than once a month while 31.8% males reported the same. 13.2% females reported never telling their dreams to others as opposed to 22.7% males. The percentage frequency for recording their dreams, for example in a journal, was also seen higher in females. 28.9% females reported recording their dreams more than once a month as opposed to 18.1% of males.

When participants were asked about dream literature, such as reading books, magazines or articles about dreams, 18.4% females reported having read several times, 39.5% reported reading one to two times, and 42.1% reported never having reading anything on dreams. Among males 31.8% reported having read several times, 18.2% one to two times, and 50% reported never having read anything. Moreover, the participants were asked to rate how much the dream literature helped them to better understand their dreams on a 5-point Likert scale. On a scale from 0 to 4, 0 indicating 'not at all' and 4 indicating 'very much', females scored a mean of 1.74 while for male group, mean was 2.32.

Some more variables were measured with regards to dreaming including dream telling, dream recording, daytime mood affected, creative dreams, problem solving dreams, and déjà vu experiences. Table 6 and Table 7 show a frequency percentage distribution for all these variables for females and males respectively.

Table6
Frequency Distribution of Various Dream Variables (Female)

Category	Telling dreams	Recording dreams	Daytime mood affected	Creative dreams	Problem solving dreams	Déjà vu experiences
Several times in a week	7.9%	10.5%	13.2%	10.5%	5.3%	18.4%
About once a week	10.5%	2.6%	2.6%	2.6%	7.9%	0%
Two to three times a month	21.1%	15.8%	21.1%	15.8%	13.2%	13.2%
About once a month	21.1%	0%	13.2%	15.8%	5.3%	7.9%
About two to four times a year	15.8%	7.9%	10.5%	15.8%	21.1%	21.1%
About once a year	5.3%	5.3%	10.5%	10.5%	13.2%	7.9%
Less than once a year	5.3%	5.3%	10.5%	13.2%	15.8%	10.5%
Never	13.2%	52.6%	18.4%	15.8%	18.4%	21.1%

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Table 7
Frequency Distribution of Various Dream Variables (Male)

Category	Telling dreams	Recording dreams	Daytime mood affected	Creative dreams	Problem solving dreams	Déjà vu experiences
Several times in a week	9.1%	9.1%	18.2%	4.5%	22.7%	0%
About once a week	9.1%	4.5%	18.2%	22.7%	9.1%	9.1%
Two to three times a month	13.6%	4.5%	13.6%	9.1%	9.1%	22.7%
About once a month	9.1%	0%	4.5%	13.6%	0%	4.5%
About two to four times a year	9.1%	9.1%	13.6%	22.7%	18.2%	36.4%
About once a year	9.1%	9.1%	0%	4.5%	9.1%	4.5%
Less than once a year	18.2%	13.6%	9.1%	4.5%	4.5%	4.5%
Never	22.7%	50%	22.7%	18.2%	27.3%	18.2%

DISCUSSION

The present study was conducted to understand and analyse various dream related patterns and behaviour in young adults. To conduct this study a survey was done on college going undergraduate and postgraduate students, using the Mannheim Dream questionnaire (MADRE) which was developed jointly by Michael Schredl, Sabrina Berres, Anna Klingauf, Sabine Schellhaas, & Anja S. Göritz in 2014. The sample group consisted of 38 females and 22 males. The results of this research show that females on average recalled their dreams more frequently than males. 78.1% females reported recalling their dreams in recent times more than once a month while 63.6% males reported the same. Only 2.6% females reported never having recalled their dreams in recent times while amongst males 22.7% reported that same. Based on the respective mean scores, emotional intensity of dreams as reported by both the genders were more or less the same i.e. somewhat intense. The average emotional tone of the dreams in terms of positive or negative was self-reported by females as close to neutral while for males it was between neutral and somewhat positive.

The nightmare frequencies in recent times were the same more or less for both the genders including the resulting distress from it. 31.6% females reported having nightmares more than once a month while 27.2% males reported the same. For the level of distress caused due to nightmares, females on a scale from 0 to 4 received a mean score of 1.58 while males scored 1.50 for the same. No statistically significant differences were found at .05 level of significance.

Furthermore, the current nightmare frequencies were correlated with childhood nightmare frequencies and lucid dreaming frequencies using the Pearson correlation coefficient. The results showed a significant positive correlation between them at .01 an .05 level of significance respectively. There was also a significant positive correlation between lucid dreaming and childhood nightmare frequency. This in other words means that those who reported high childhood nightmare frequency were also mostly the ones to report relatively high frequency for current nightmares as well as lucid dreaming. Since, correlation merely indicates simultaneous appearance of two scores in certain direction, any kind of causation relationship cannot be established within these groups.

The general attitude towards dreams on average was seen as close to neutral in females while for males it was between neutral and somewhat positive on a 5-point Likert scale.

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Moreover, we see that females on average preferred telling their dreams to others and recording their dreams, for example in a journal, more frequently than males. Males on the other hand showed a slightly more positive attitude for dreams and liked reading on the topic of dreams more often. 81.8% males reported that reading dream literature helped them from somewhat to very much in understanding their dreams. 60.6% females reported that same.

On comparing the results of this research with previous findings we see a lot of similarities and some differences as well. The gender wise dream recall frequency in this research showing that females on average recall dreams more frequently than males, is very much in line with the original author of the Mannheim Dream questionnaire, Michael Schredl's work (Schredl et al., 2014). This trend in dream recall frequency is seen in other versions of the questionnaire as well like for example the French version of the test used on Belgian sample (Florence et al., 2018). There were no major gender differences found with regards to emotional intensity of dreams, nightmare frequency and distress from nightmare frequency in this research. However, some previous works have shown females to be outperforming males in these domains (Schredl, 2002 & 2014). The correlation between current nightmare frequency and childhood nightmare frequency was in line with previous research i.e. a statistically significant correlation was found. It was also observed that females in this research preferred to tell their dreams and record their dreams more frequently than males which confirms Schredl's findings (Schredl, 2014)

CONCLUSION

In conclusion we can say that males and females differ on some aspects of dreaming and are similar on some. While females scored higher on dream recall, dream telling and dream recording frequency, males scored higher on general attitude towards dreams and reading dream literature. No major gender differences were found in emotional intensity of dreams, nightmare frequency and level of distress from nightmares.

The findings of this research that was performed on an Indian sample, to a great extent conformed with the findings of previous studies that were done on young adult population from various countries. This highlights the universality of the human dreaming behaviour and the strong reliability of the questionnaire. For further research more variables could be tested to tap into the minute cultural differences of the population that perhaps exist but have not been able to appear in a questionnaire test yet.

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