Original Article

Which variable has more power to predict terrifying dreams? Rumination, temperament, attachment styles, or family relations?

Farzaneh Farahmand Dehghanpoor Varnamkhasti[1]; *Zahra Yousefi[2]

[1]MS. in clinical psychology, Department of Psychology, Isfahan (Khorasgan) Branch, Islamic Azad University, Isfahan, Iran
[2]Assistant professor, Department of Psychology and Educational Sciences, Islamic Azad University, Isfahan Branch (Khorasgan, Isfahan, Iran)

Abstract

Introduction: The present study aims at explaining and analyzing the relationship between the variables of rumination, temperament, attachment styles, and family relations and the occurrence of terrifying dreams in university students.

Materials and Methods: The study used a descriptive quantitative correlational research method. The statistical population of the study consisted of all the students of Islamic Azad Universityof Isfahan (Khorasgan Branch) from which 180 students were selected randomly through cluster sampling method. To collect data, questionnaires including the Inventory of Terrifying Dreams (Yousefi), the Inventory of Rumination (Yousefi), Positive and Negative Affect Schedule-Expanded Form (PANAS-X), the Inventory of Attachment Styles (Armesden and Greenberg), and the Inventory of Family Relations (Olson and Barnes), were used. Data analyzed through Pearson coefficient, regression analysis by SPSS software, version 21.

Results: The results of the study revealed that the variables of rumination, the insecure attachment toward the father, and negative affect had a significant positive relationship with terrifying dreams. On the other hand, There was a significant negative relationship between family relations and the occurrence of terrifying dreams ($P<0.05$). Moreover, rumination and the insecure attachment toward the father were able to predict terrifying dreams ($P<0.05$).

Conclusion: Regarding the results, changes in the states of rumination, the insecure attachment toward the father, and negative affect will change the occurrence of terrifying dreams.

Keywords: Attachment styles, Family relations, Rumination, Temperament, Terrifying dreams

Introduction

Terrifying dreams or nightmares are the most common childhood sleep disorders, which in some people (5-10%) continue into adulthood. When nightmares become so significant that they impact the individual's waking life, they will need clinical attention (1). A type of dream evident in many psychological disorders is the terrifying dream or the nightmare. Indeed, terrifying dreams are disturbing, vivid dreams which cause a

*Corresponding Author:
Department of Psychology and Educational Sciences, Islamic Azad University, Isfahan Branch (Khorasgan, Isfahan, Iran)
z.yousefi@khuisf.ac.ir

gradual increase of stress in the sleeper so that they are wakened feeling scared. Like other dreams, nightmares occur almost always during REM toward the end of the night. Some people experience terrifying dreams from time to time; others experience them at times of stress and illness. Seemingly, terrifying dreams are related to rumination, temperament, attachment styles, and family relations. Rumination refers to conscious thoughts focused on a single topic or theme. Rumination is often associated with some emotional disorders, including depression, obsessive-compulsive disorder, generalized anxiety, and post-traumatic stress. Linked to the thoughts related to stressful life events or depressive mood, ruminations are not goal-oriented and do not address the individuals to any solutions. When people are ruminating, they are not socially engaged and active in the environment but prevented from performing their goal-oriented activities. Therefore, unfulfilled states related to rage, spite, sorrow, and failure to perform the duties manifest themselves symbolically in terrifying dreams (2-4).

Temperament can also be linked to terrifying dreams. It is defined as stable individual differences in the quality and intensity of emotional reactions, activity level, attention, and emotional self-regulation (5). Temperament is used when individual differences in skills and percept-based habits are emphasized. The brain regions regulating temperament are mainly the amygdala, hypothalamus, striatum, and other parts of the limbic system (6). Temperament consists of two components of positive affect and negative affect. The high positive effect indicates high energy, full concentration, and pleasurable engagement, while low positive affect shows sadness and lethargy. On the other hand, negative affect (NA) is involved with anger, contempt, disgust, guilt, fear, and nervousness (7).

Attachment is another variable in the present study, the relation of which with terrifying dreams was studied. Attachment is defined as a caregiver-child relationship. Weiss believes that knowing a person is worried about you and has you in their mind is a secure source for you at any age and condition. According to Bowlby (1980), attachment behaviors are always present and active throughout the life cycle, so that attachment bonds are developed in adulthood life

and affect important adulthood activities (8). Three attachment styles have been defined for infants; secure, avoidant, and ambivalent, which would be effective in adulthood (9). Secure, avoidant, and ambivalent individuals apply entirely different strategies of regulating emotions and processing emotional information (10). People with a secure attachment style use those emotion regulation coping strategies that minimize stress and activate positive emotions. On the other hand, insecure and ambivalent people use strategies that stress negative emotions (11). Given the formation of the secure attachment style in the family, its significance in family relationships cannot be overlooked.

In the present study, family relations have been considered the correlative of the terrifying dreams. Putnam believed different dimensions and indicators in the families could affect the personality development in members (12). Love and fondness, which are the main reasons for intimacy and affection in the family, bring about more interactions of the family members, reduce complexities, and improve the complementary relationships of different bases between married couples (13). Any feelings of prosperity or adversity can reflect a variety of intra-family processes (14). Upholding human relationship principles; i.e., respect for one another's opinion, adhering to the principle of honesty, loyalty, and confidentiality, maintaining mutual emotions, showing affection to one another, supporting each other's benefits creates a peaceful environment that would boost spirits of the members of the family (15).

Regarding the importance of sleep to one's well-being, many studies have been done on different aspects of sleep disorders. For example, in a study conducted by Pourmohseni, it was revealed that rumination and worry and their domains are correlated with sleep disturbances (16). Furthermore, Rettew and Mckee found a significant positive relationship between the negative affect and terrifying dreams (17).

In another study, Farahmand et al. indicated that rumination may be a predictor for the occurrence of terrifying dreams and that one of the ways to reduce terrifying dreams is the reduction of rumination and negative affect (18). According to the findings of the study conducted by Ong et al., people with sleeping disorders tend to show

higher levels of rumination prior to sleep (19). Salimi et al., in their study, showed that changes in worry and dependent, histrionic, narcissist, and anti-social personality disorders would cause changes in terrifying dreams (20). Mohammadi, in another study, revealed the positive relationship between terrifying dreams and the insecure attachment style (21). However, the literature review shows that there has been no study investigating the correlatives of terrifying dreams. Furthermore, no Iranian research has been conducted on this aspect of terrifying dreams either. Therefore, considering terrifying dreams as one of the symptoms of a disorder and given the importance of peaceful sleep for people and a good treatment framework and proper prevention, all the correlatives related to this variable need to be detected and analyzed. Indeed, determining the factors affecting terrifying dreams would contribute to the preparation of prevention and treatment models for terrifying dreams. Therefore, considering what was mentioned above, the present study investigates the predictive effect of rumination, temperament, attachment styles, and family relations on terrifying dreams.

Materials and Methods

The present study aims at explaining and analyzing the relationship between the variables of rumination, temperament, attachment styles, and family relations and the occurrence of terrifying dreams in the students of Islamic Azad University of Isfahan (Khorasgan Branch). The study was conducted using a descriptive quantitative correlational research method. The statistical population of the study consisted of all the 22000 students of Islamic Azad University of Isfahan (Khorasgan Branch), for which Azad University granted permission. Since the study was correlational research, for each variable and sub variable, 15 subjects were considered. There were 12 variables and sub-variables in total. A sample of 180 subjects (122 females and 50 males) was selected using the cluster sampling method. The sample size was calculated by the formula offered by Tabachnick and Fidell (22), i.e., from 14 faculties, six faculties (nursing. law, physical education, computer, engineering, and management), and each faculty, one class was selected randomly. Afterward, the research

questionnaires were distributed among the students of the selected classes. Inclusion criteria involved undergraduate, graduate, and postgraduate students studying in Islamic *Azad University* of Isfahan (Khorasgan Branch), 2015-16, and willingness to participate in the study. Those who did not meet inclusion criteria and also the ones who were not willing to participate were excluded from the study. Since the questionnaire was the data source in the study, the participants were asked not to write their names on the questionnaires, and they have assured confidentiality of their responses so that their rights and privacy were respected. After the questionnaires were completed, the data were collected and analyzed using Pearson Correlation Coefficient, Regression Analysis, and SPSS software version 21.

Research instruments

A) Yousefi's Inventory of Terrifying Dreams: The inventory of terrifying dreams is a 24-item scale which developed by Yousefi in which the questions use a 5-point scale on a continuum from strongly agree to disagree strongly. Five experts confirmed its face validity, and its internal consistency was calculated using Cronbach alpha as $\alpha=0.79$. The inventory's final score is the sum of the respondent's rating and does not have a reversed score (18). The researchers calculated the internal consistency for the second time using Cronbach alpha ($\alpha=0.92$).

B) Positive Affect and Negative Affect Schedule (PANAS-X): This schedule was developed by Watson, Clark, Tellegen (7). This is a 20-item scale that considers ten terms for each positive affect and negative affect scale. In this scale, the participants' emotions regarding their condition in the last few weeks were assessed in the five-point Likert scale (Not at all, Just a little, somewhat, a lot, a great deal). Psychometrics of the schedule designed by Watson et al. calculated via Cronbach's alpha as 0.86 to 0.90 for the positive effect and 0.84 to 0.87 for the negative affect. In Iran, confirmatory factor analysis of PANAS has been shown by Bakhshipour and Deghkam (23), and Chronbach's alpha coefficient for both the positive and negative affect scales was 0.85. The schedule can also separate the patients suffering from depression from those suffering from stress. Questions related to

positive affect include items 1, 3, 5,9,10, 12, 14, 16, 17, 19, and the rest are related to the negative affect. The schedule does not have a reversed score. The internal consistency was obtained at 0.66.

C) Yousefi's Inventory of Rumination: This inventory has a 22-item short form and a 38-item long-form with five subscales (brooding, self-blame, symptom-based rumination, introspection, rumination about the possible causes of depression). Following the Likert scale, the items are rated on a five-point scale from not at all to a great deal with no reversed score. The inventory has high internal consistency (Cronbach's alpha= 0.93) and high test-retest reliability (0.78). The inventory was designed and standardized by Yousefi et al. in 2008. The internal consistency with a Cronbach's alpha of 0.93 indicates good reliability and internal consistency (24). In the present study, the short form of the inventory was used, and the total score of the inventory was calculated. The internal consistency of the inventory was calculated as well via Cronbach's alpha (α=0.90).

D) The Inventory of Attachment Styles: The inventory developed by Armsden and Greenberg (1987) contains 67 items is a self-assessment inventory rated on a five-point Likert scale ranging from strongly agree to disagree strongly. Items 1,2, 4, 5, 7, 12, 13, 15, 16, 19, 20, 21, 22, 24, 25 are related to the secure attachment style and items 3,6, 8, 9, 10, 11, 14, 17, 18, 23 are related to the insecure attachment style.

The inventory has no reversed score. In their study, Hashemi and Jokar calculated reliability via Cronbach's alpha and the reliability via factor analysis. Cronbach's alpha for parent and peer attachment subscales were 0.82 and 0.72, respectively (25). In the present study, the internal consistency for the subscales of attachment toward the father (α=0.87) and attachment toward the mother (α= 0.77) was calculated for the second time via Cronbach's alpha.

E) The inventory of family relations (Alson and Barnez): To assess family relations, the researchers used the inventory of Barnes and Olson (2004) that contained ten questions and rated on the five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The inventory has no reverse score. The internal consistency for a population of 2465 people was 0.95, and the test-retest reliability was 0.86. In the present study, the internal consistency was calculated for the second time via Cronbach's alpha (α=0.93).

Results

To investigate the hypothesis of the study, i.e., there are multiple relationships between terrifying dreams and the variables of rumination, temperament attachment styles, and family relations, a Pearson correlation coefficient was used, the results of which are presented in Table 1.

Table 1. The correlation coefficients between terrifying dreams and the variables of rumination, temperament, attachment styles, family relations

Variables	Terrifying dreams	P
Rumination	0.319	0.000
Positive affect	-0.098	0.192
Negative affect	0.194	0.009
secure attachment toward the father	0.118	0.124
insecure attachment toward the father	0.273	0.000
secure attachment toward the mother	-0.090	0.233
insecure attachment toward the mother	0.034	0.653
Family relation	-0.156	0.037

The results in table 1 show that the variables of rumination, negative affect, and insecure attachment style toward the father have a significant positive relationship with terrifying dreams. The variable of family relations, on the other hand, has a significant negative relationship with terrifying dreams. Stepwise regression analysis was used to analyze the most important variable predictive of terrifying dreams.

Table 2. Stepwise regression analysis to predict terrifying dreams with rumination and the insecure attachment toward the father as predictive variables

Step	Variables	R	r²	Net share	F	df 1	df 2	P
1	rumination	0.355	0.126	0.126	24.66	1	170	0.000
2	Insecure attachment toward the father	0.413	0.171	0.045	9.119	1	169	0.003

As seen in Table 2, rumination among other variables is inserted in the regression equation in step 1 with the regression coefficient of 0.355, which can explain 12.6 % of the variance of the terrifying dreams (*P*< 0.000). In step 2, the insecure attachment toward the father is inserted in the regression equation with the regression coefficient of 0.413, which can explain 4.5 % of the variance of the terrifying dreams (*P*< 0.003). As seen, the predicted variables in each step are significant and reliable (*P*< 0.000)

Table 3. ANOVA analysis to assess the significance of the predictive variables of the insecure attachment toward the father and rumination

Variables	N	Sum of squares	df	Mean square	F	P
rumination	Regression	6734.201	1	6734/201	24.466	0.000
	Residual	46791.846	170	275/246		
	Total	53526.047	171	-		
Insecure attachment toward the father	Regression	9129.641	2	4564.821	17.377	0.000
	Residual	44396.405	169	262/701		
	Total	53526.047	171	-		

Table 4. Non-standardized and standardized coefficients of regression equation with the insecure attachment toward the father and rumination as predictive variables

Model	variable	B coefficient	Std error	Beta coefficient	T	P
1	Constant value	33.916	5.386	-	6.297	0.000
	Rumination	0.554	0.112	0.355	4.946	0.000
2	Constant value	24.499	6.117	-	4.005	0.000
	Rumination	0.492	0.111	0.315	4.420	0.000
	Insecure attachment toward the father	0.582	0.193	0.215	3.020	0.003

Discussion

As Table 4 shows, the predictive non-standardized and standardized coefficients of the equation of terrifying dreams with rumination and the insecure attachment toward the father variables are all significant. Taking the above table into account, the equation of terrifying dreams would be as follows:

Terrifying dreams= 0.492 (rumination) + 0.582 (the insecure attachment toward the father) + 24.499.

One hundred eighty subjects comprised the study population, of which 67.8 % were females, and 27.8% were males. 50% of the subjects were between 18 and 24, 30% between 25 and 31, and the rest were over 32. It needs to be stated that 64% of the subjects were single. The education level of the subjects as follows: 15.5 % (associate's degree), 62.8 % (bachelor's degree), 10.6 % (master's degree), and 4.4% (PhD degree). One of the clinical symptoms is the terrifying dreams seen in many emotional disorders. In the present study, the researchers found the answer to the question of which meta-cognitive variable, i.e., rumination, temperament, and family variables (family relations and attachment styles), among others, was the strongest predictor of

terrifying dreams. Stepwise regression analysis revealed that insecure attachment toward the father and rumination are the most potent predictors of terrifying dreams.

Although no study has specifically addressed this issue, some studies have been conducted on sleep disorders. For instance, Salimi and Yousefi showed that thought control strategies could predict terrifying dreams (17). Pourmohseni, in another study, proved that negative emotions could predict sleep disturbances. His findings align with the results of the present study for the positive relationship of rumination and temperament with the occurrence of terrifying dreams (13). However, there have been no published studies on the relationship between family-related variables and terrifying dreams to examine their alignment or misalignment with the findings of the present study. The significant positive relationship of negative affect with terrifying dreams in the present studies aligns with the research conducted by Rettew and McKee (14). The findings of the present study on the positive relationship between the insecure attachment toward the father and terrifying dreams align with the findings of Mohammadi (18).

To explain the positive relationship between rumination and terrifying dreams, it can be stated that rumination is a negative emotion regulation strategy that directs attention to negative thoughts and problems and leads to the development of the symptoms exacerbating negative emotions. Over-attention to problems and distress will preoccupy the person with them and consequently lead to depression. The frequent use of rumination engages the mind so much that the individual fails to see and understand the problems and events and, thus, cannot focus on anything ales. These ruminative thoughts impair sound sleep and manifest themselves symbolically in terrifying dreams.

To explain the relationship between negative affect and terrifying dreams, it can be stated that temperament is the heredity basis of emotions and learnings acquired by spontaneous emotional behaviors that are seen as visible habits in the early days of life and remain the same throughout one's life. These hereditary traits are evident, fairly stable, predictive of adolescence and adulthood behavior, and different cultures.

Negative affect is a general dimension of subjective distress and unfavorable engagement that includes the states of anger, contempt, disgust, guilt, fear, and nervousness (7). Seemingly, these emotional states would cause intra-individual and inter-individual problems for the person. For instance, anger, contempt, disgust, guilt, fear, and nervousness prevent a positive and significant inter-individual relationship. Therefore, these emotions trigger inter-individual distress and cause inter-individual problems, which intensify these emotions and vice versa. Intra-individual and inter-individual distresses seem to manifest symbolically in terrifying dreams. Thus, it can be said that improved temperament and reduced rumination will decrease the occurrence of terrifying dreams.

There was a significant positive relationship between the insecure attachment toward the father and terrifying dreams. To explain this relationship, a review of the traits of the people with an insecure attachment would be helpful. The insecure attachment is divided into ambivalent and avoidant attachment styles. People with anxious/ambivalent attachment styles are unsure about others' emotions toward themselves and are skeptical of their worth or others' support. This state of skepticism and fear leads to hypervigilance and suspicion, reassurance-seeking behavior, angry protests, and jealousy. Therefore, the father, for different reasons such as problems with the mother or failure to establish a good relationship with the child, behaves in a way in which the children feel insecure and experience a sort of instability and do not trust the father as a secure base provider. The child, indeed, has an unknown relationship with the father. Presumably, these relationship problems with the father as an attachment figure would make the child use this relationship pattern for all his relationships and fail to build relationships with others. Since the relationship pattern is that the father and father-child attachment style is poor, the child's problems will manifest symbolically in terrifying dreams.

The present study had some limitations, including the sample of the study that consisted of only students, and thus, generalization of the data to other walks of life faced some limitations. Another limitation of the study was that the

questionnaire was the only research tool to collect the data. If other tools like the interview and the observation had been used, the results would have been more precise. Furthermore, the only source of data collection was the students themselves, and other sources like friends and peers were not used.

Conclusion

It can be concluded that reduced rumination and negative affect will result in less likelihood of terrifying dreams. In addition, healthy family relations will reduce the occurrence of terrifying dreams.

Acknowledgments

References

1. Dadsetan P. [Psychopathology transition from childhood to adulthood]. 8th ed. Tehran: SAMT; 2007: 11-492. (Persian)
2. Mohaghegh M. [Sleeping and waking and dreaming of science and religion]. Tehran: Besat; 1985: 1-52. (Persian)
3. Papajerjeyouk K, Welz A. [New theories in depression disorder]. Barkatain M, Yousefi Z, Bahrami F. (translators). 1st ed. Isfahan: Arkane Danesh; 2007: 1-278.
4. Alloy LB, Abramson LY, Hogan ME, Whitehouse WG, Rose DT, Robinson MS, et al. The Temple-Wisconsin cognitive vulnerability to depression CVD project: Lifetime history of Axis I psychopathology in individuals at high and low cognitive depression. J Abnorm Psychol 2000; 109: 403-418.
5. Betts J, Gullone E, Allen JS. An examination of emotion regulation, temperament, and parenting style as potential predictors of adolescent depression risk status: A correlational study. Br J Dev Psychol 2009; 27: 473-85.
6. Cloninger CR. Temperament and personality. J Curr Opin Neurobiol 1994; 42: 266-73.
7. Watson D, Clark L, Tellegen A. Development and validation of brief measures of positive and negative affect: The PANAS scale. J Pers Soc Psycol 1988; 54: 1063-70.
8. Weiss RS. Foreward. In: Sperling MB, Berman WH. (editors). Attachment in adults. New York: Guilford; 1994: ix-xv.
9. Goodwin I. The relevanse of attachment theory to the philosophy, organization, and practice of adult mental health care. Clin Psychol Rev 2003; 23: 35-56.
10. Hazan C, Shaver P. Romantic love conceptualized as an attachment process. J Pers Soc Psychol 1987; 52: 511-24.
11. Shaver PR, Schachner DA, Mikulincer M. Attachment style, excessive reassurance seeking, relationship processes, and depression. Pers Soc Psychol Bull 2005; 31: 343-59.
12. Mikulincer M, Shaver PR. Mental representations of attachment security: Theoretical foundation for a positive social psychology. In: Baldwin MW. (editor). Interpersonal cognition. New York: Guilford; 2005: 233-66.
13. Tavasoli, GHA. [Sociological theories]. Tehran: SAMT; 2008: 1-538. (Persian)
14. Mahdavi MS, Hashemi K. [Sociological study of the impact of education on human relationships in the family]. Social sciences bulletin 2010; 4(4): 55-81. (Persian)
15. Navabinezhad SH. [Marriage counseling and family therapy]. Tehran: Anjoman-e olia va morabian; 2016: 36-132. (Persian)
16. Afzalnia MR. [Mental health family].Tehran: Nasl-e-Noandish; 2007: 1-406. (Persian)
17. Poormohseni F. [The impact of rumination and worry about sleep disturbances]. Daneshvar medicine journal 2014; 21: 1-12. (Persian)
18. Rettew DC, McKee L. Temperament and its role in developmental psychopathology. Harvard Rev Psychol 2005; 131: 14-27.
19. Farahmand DVF, Yousefi Z. [Multiple relationships between rumination and mood with frightening dreams]. Iranian journal of psychiatry and clinical psychology 2016; 22(2): 85-92. (Persian)
20. Ong JC, Shapiro SL, Manber R. Combininig mindfulness meditation with cognitive- behavior therapy for insomnia: A treatment - development study. Behav Ther 2008; 39: 171-82.
21. Salimi DN, Yousefi Z. [Multiple relations among thought control strategies and symptoms of personality disorders with nightmare]. Iranian journal of psychiatry and clinical psychology 2018; 24(3): 298-309. (Persian)
22. Mohammadi R. [Mothers' family relations, rumination, forgiveness and attachment style with the symptoms of frightening dreams among adolescents girls in Qom]. MA dissertation. Isfahan: Islamic Azad University Isfahan Branch, 2014: 111 (Persian)

23. Tabachnick BG, Fidell LS. [Using Multivariate statistics]. 5th ed. Boston: Pearson Education; 2006: 28-980.

24. Bakhshipour A, Deghkam M. [Confirmatory factor analysis Positive and Negative Affect Scale]. Journal of psychology 2006; 9: 351-65. (Persian)

25. Yousefi Z, Abedi M, Bahrami F, Mehrabi H. [Validation, factor structure, reliability and standardizition of Rumination Inventory]. Journal of psychology 2009; 13: 54-68. (Persian)

26. Hashemi Z, Jokar BA. [Causal modeling of emotional resilience: Parent and peer attachment, cognitive emotion regulation and coping strategies]. Journal of psychological studies 2013; 9(1): 9-37. (Persian)

27. Barnes HL, Olson DH. Parent adolescent communication scale. In: Olson DH. (editor). Family inventories: Inventories used in a national survey of families across the family life cycle. Minneapolis, MN: Family Social Science, University of Minnesota; 1982: 33-48.