

## Dreams, Nightmares, and Schizotypal Personality Organization

Ross Levin and Michael L. Raulin

State University of New York at Buffalo

To explore the relationship between nightmares and schizotypy, 935 college students completed a nightmare questionnaire, three schizotypy scales, and the Beck Depression Inventory. High scorers (2 standard deviations or more above the mean) on the Magical Ideation and Perceptual Aberration Scales reported that their nightmares were more salient, but not more frequent, than for low scorers (less than .5 standard deviations above the mean). In contrast, anhedonics reported less frequent nightmares and less subjective distress from them. However, a significant relationship between nightmares and the Beck was also found, suggesting that nightmare frequency may be associated with general psychological distress and may not be specific to schizotypal symptomatology. As in previous research, findings were more dramatic for females than males.

Within the past 15 years, considerable attention has focused on the personality of the nightmare sufferer and the possible relationship between frequent nightmares and schizotypal personality organization (i.e., Hartmann, 1984; Kales et al., 1980; Levin, 1987). Nightmares, vivid and terrifying episodes that wake the dreamer, can be so severe that they have been likened to brief psychotic episodes (Detre & Jarecki, 1971; Fischer, Byrne, Edwards, & Kahn, 1970; Hartmann, 1984; Mack, 1970). The nightmare (Detre & Jarecki, 1971; Mack, 1970; Sullivan, 1962) is not only similar to an acute psychotic episode, but frequent and severe nightmares often immediately precede the onset of a psychotic episode (Ariceti, 1974). Frequent nightmare sufferers produce MMPI profiles typical of schizophrenics (Hartmann et al., 1981, 1987; Kales et al., 1980) and are more likely than controls to receive a schizophrenia spectrum diagnosis based on interview data (Hartmann et al., 1981, 1987; Van der Kolk, Blitz, Burr, Sherry, & Hartmann, 1984). Hartmann (1984) also reports a greater incidence of mental illness in family members of his nightmare sufferers as compared to controls.

In a preliminary study of 669 undergraduates (Levin & Raulin, 1988), a relationship was found between nightmare frequency and scores on three of four measures of schizotypic signs (intense ambivalence, perceptual aberration, somatic symptoms, but not for physical anhedonia). However, this pilot study did not address a number of issues. The first was whether schizotypal organization is predictive of nightmares specifically or, rather, is indicative of overall dream recall frequency. The second was whether the aforementioned relationship between schizotypal organization and nightmare frequency is mediated by the degree of subjective distress from the nightmares. The third was whether the observed relationship is specific to schizotypal psychopathology or if higher nightmare frequencies are associated with other types of psychological distress. The current study is designed to address all three of these issues.

### Method

#### Subjects

Subjects included 459 male and 476 female undergraduates at a major state university who completed the schizotypy scales, the Beck Depression Inventory, and a nightmare questionnaire as part of the requirements for an Introductory Psychology Course.

### Procedure

Subjects were tested in class as part of a mass screening procedure at the beginning of the semester. The forms were administered independently along with a number of other forms from other research projects so that subjects were unlikely to relate the forms to one another. The nightmare questionnaire was a one-page screening device. This version consisted of six items measuring the dream variables of this study: (1) overall dream recall frequency, (2) nightmare frequency, (3) age of onset of nightmares, (4) perceived level of nightmare distress, (5) rating of nightmare vividness, and (6) a rating of how personally meaningful the nightmares are. The schizotypy scales included Physical Anhedonia (Chapman, Chapman, & Raulin, 1976), Perceptual Aberration (Chapman, Chapman, & Raulin, 1978), and Magical Ideation (Eckblad & Chapman, 1983). Items on these scales were intermixed on a single protocol with an Infrequency Scale included to identify random responders. The Beck Depression Inventory (Beck, 1967) was appended to the schizotypy scale protocol. Using the standard procedure of Chapman, Chapman, Raulin, & Edell (1978), groups were formed on each of these four measures by taking the subjects who scored two standard deviations above the mean (experimental group) and subjects who scored no higher than .5 standard deviations above the mean (control group). Subjects scoring between .5 and 2 standard deviations above the mean were not included in the analyses.

### Results

Table 1 presents the results of separate one-way ANOVAs for males and females for the three schizotypy scales (Physical Anhedonia, Perceptual Aberration, and Magical Ideation) and the Beck Depression Inventory. Separate analyses were conducted on each of the six dream variables. As in previous research (Levin & Raulin, 1988), the results were more dramatic for females than for males, although the direction of differences are consistent across sexes. As predicted, anhedonics reported significantly fewer dreams and nightmares and found them less distressful, vivid, and personally relevant. This replicated the Levin and Raulin (1988) study and is consistent with numerous previous studies that have found that anhedonic subjects are less responsive to stimulation (Simons, 1981, 1982). This is in sharp contrast to the other scales, where the differences, when significant, were always in the direction of high scoring subjects reporting more nightmares and greater distress from the nightmares. It should also be noted that, although the absolute frequency of nightmares was not elevated in high scorers on the Perceptual Aberration and Magical Ideation Scales, nightmares were generally experienced in a more distressing, vivid, and personally meaningful manner by these subjects. In addition, subjects scoring high on the Beck Depression Inventory reported an increase in both the frequency and experiential qualities of nightmares, although this was not accompanied by any overall increase in dream recall.

### Discussion

The results are interesting in a number of ways. First, the previous finding that nightmare frequency and several schizotypic signs are positively related was not replicated. This may be partially due to the use of different schizotypy scales in the present study, although two scales, Perceptual Aberration and Physical Anhedonia, were used in both studies. However, the degree of saliency of the nightmares did prove to be highly discriminating between the experimental and control subjects, a finding that supports Belicki and Parry's (1987) contention that it is the level of nightmare distress that may be a better predictor of pathology.

Table 1  
Relationship of Dreaming and Nightmares  
to Schizotypy and Depression in College Students

## FEMALE COLLEGE SUBJECTS

## SCALES

DREAM VARIABLES	Physical Anhedonia	Perceptual Aberration	Magical Ideation	Beck Depression
Dream Recall Frequency	$p = .03$ less	$p = .26$	$p = .0005$ more	$p = .40$
Nightmare Frequency	$p = .02$ less	$p = .96$	$p = .57$	$p = .006$ more
Age of Onset of Nightmares	$p = .72$	$p = .36$	$p = .70$	$p = .20$
Distress Level of Nightmares	$p = .03$ less	$p = .004$ more	$p = .06$	$p = .02$ more
Vividness of Nightmares	$p = .02$ less	$p = .20$	$p = .006$ more	$p = .05$ more
Meaningfulness of Nightmares	$p = .01$ less	$p = .004$ more	$p = .0001$ more	$p = .001$ more

## MALE COLLEGE SUBJECTS

Dream Recall Frequency	$p = .26$	$p = .43$	$p = .40$	$p = .78$
Nightmare Frequency	$p = .16$	$p = .19$	$p = .74$	$p = .09$
Age of Onset of Nightmares	$p = .70$	$p = .14$	$p = .93$	$p = .71$
Distress Level of Nightmares	$p = .41$	$p = .18$	$p = .55$	$p = .26$
Vividness of Nightmares	$p = .05$ less	$p = .28$	$p = .53$	$p = .24$
Meaningfulness of Nightmares	$p = .03$ less	$p = .003$ more	$p = .30$	$p = .17$

NOTE: For significant results the direction indicated ("more" or "less") reflects the mean of the high scoring subjects relative to the subjects scoring within the normal range

Secondly, in sharp contrast to the pattern observed for the other scales, anhedonic subjects reported fewer dreams and nightmares and were less affected by them. This supports the argument (Propper et al., 1987) that anhedonia characterizes a discernible subgroup of schizotypes characterized primarily by

negative symptomatology. Anhedonics generally report greater social withdrawal (Chapman, Edell, & Chapman, 1980) and show less psychophysiological responsivity to external stimulation (Simons, 1981, 1982). The current study suggests that anhedonics may also be less responsive to the internal stimulation that leads to dreams and nightmares. This is particularly interesting in that the direction of observed differences in the anhedonic and depressed groups were opposite, in spite of the fact that an apparently identical criteria (pleasure deficit) helps to define each group. The depressives seem to be more distressed and more intensely focused on internal events than the anhedonics, a hypothesis manifested in the present study by significantly greater attentiveness to their psychological activities. Clearly the difference between a chronic pleasure deficit (anhedonia) and an acute deficit (depression) has considerable clinical utility.

It is particularly noteworthy that the two dimensions that relate to the psychological experience of nightmares, namely, level of perceived distress and the degree of meaning attributed to these dreams, were significantly elevated in all of the groups except the anhedonics. Thus, it may well be that the degree of perceived distress is not a function solely of an increased frequency of nightmares, but of a greater subjective sensitivity to these low base rate events when they occur. The present data suggest that this seems to be true for subjects suffering from a variety of psychological symptoms and this relationship may not be specific to the schizotypal spectrum as previously hypothesized.

Dreams have long been regarded as invaluable data pertaining to the internal dynamics of individuals. Given its disruptive nature, the nightmare seems to reflect well the psychic turmoil characteristic of individuals experiencing psychological distress. The current data are consistent with the notion that dreams and especially nightmares may be a particularly fruitful area in which to explore the inner conflict inherent in psychiatric disorders.

## References

- Beck, A. T. (1967). *Depression: clinical, experimental and theoretical aspects*. New York: Harper & Row.
- Belicki, K., & Parry, A. (1987, April). Distress associated with nightmares as a mediating variable in the prediction of nightmare frequency. Paper presented at the Eastern Psychological Association Convention, Arlington, VA.
- Blatt, S. J., & Wild, C. M. (1976). *Schizophrenia: A developmental analysis*. New York: Academic Press.
- Chapman, L. J., Chapman, J. P., & Raulin, M. L. (1976). Scales for physical and social anhedonia. *Journal of Abnormal Psychology*, *85*, 374-382.
- Chapman, L. J., Chapman, J. P., & Raulin, M. L. (1978). Body-image aberration in schizophrenia. *Journal of Abnormal Psychology*, *87*, 399-407.
- Chapman, L. J., Chapman, J. P., Raulin, M. L., & Edell, W. S. (1978). Schizotypy and thought disorder as a high risk approach to schizophrenia. In G. Serban (Ed.) *Cognitive deficits in the development of mental illness*. (pp. 351-360). New York: Brunner-Mazel.
- Chapman, L. J., Edell, W. S., & Chapman, J. P. (1980). Physical anhedonia, perceptual aberration, and psychosis proneness. *Schizophrenia Bulletin*, *6*, 639-653.
- Detre, T. P., & Jarecki, H. G. (1971). *Modern psychiatric treatment*. Philadelphia: J. B. Lippincott.
- Eckblad, M., & Chapman, L. J. (1983). Magical Ideation as an indicator of schizotypy. *Journal of Consulting and Clinical Psychology*, *51*, 215-225.
- Fischer, C., Byrne, J., Edwards, A., & Kahn, E. (1970). A psychophysiological study of nightmares. *Journal of the American Psychoanalytic Association*, *18*, 747-782.

- Hartmann, E. (1984). The nightmare. New York: Basic Books.
- Hartmann, E., Russ, D., Van der Kolk, B., Falke, R., & Oldfield, N. (1981). A preliminary study of the personality of the nightmare sufferer: relationship to schizophrenia and creativity? American Journal of Psychiatry, 138, 794-797.
- Hartmann, E., Russ, D., Oldfield, M., Sivan, I., & Cooper, S. (1987). Who has nightmares? Archives of General Psychiatry, 44, 49-56.
- Kales, A., Kales, J. D., Soldatos, C. R., Caldwell, A. B., Charney, D. S., & Martin, E. D. (1980). Nightmares: Clinical characteristics and personality patterns. American Journal of Psychiatry, 137, 1197-1201.
- Levin, R. (1987). Ego boundary impairment and thought disorder in frequent nightmare sufferers. Unpublished doctoral dissertation; SUNY at Buffalo.
- Levin, R., & Raulin, M. L. (1988, April). Further evidence for a proposed relationship between frequent nightmares and schizotypal personality organization. Paper to be presented at the Eastern Psychological Association Convention, Buffalo.
- Mack, J. (1970). Nightmares and human conflict. Boston: Houghton Mifflin Company.
- Propper, S., Raulin, M. L., Lowrie, G. S., Trigoboff, D. H., Henderson, C. A., & Watson, H. S. (1987, August). Heterogeneity of schizotypy: searching for symptom patterns. Paper presented at the American Psychological Convention, New York.
- Simons, R. F. (1981). Electrodermal and cardiac orienting in psychometrically defined high-risk subjects. Psychiatry Research, 4, 347-356.
- Simons, R. F. (1982). Physical anhedonia and future psychopathology: An electrocortical continuity? Psychophysiology, 19, 433-441.
- Sullivan, H. S. (1962). Schizophrenia as a human process. New York: Norton.
- Van der Kolk, B., Blits, R., Burr, W., Sherry, S., & Hartmann, E. (1984). Nightmares and trauma: a comparison of nightmares after combat with life-long nightmares in veterans. American Journal of Psychiatry, 141, 187-190.

Paper Presented at the  
APA Convention  
Atlanta, Georgia  
August 13, 1988