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Recurrent Dreams and Psychosocial Adjustment in Preteenaged Children

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Abstract

Research indicates that recurrent dreams in adults are associated with impoverished psychological well-being. Whether similar associations exist in children remains unknown. The authors hypothesized that children reporting recurrent dreams would show poorer psychosocial adjustment than children without recurrent dreams. One hundred sixty-eight 11-year-old children self-reported on their recurrent dreams and on measures of psychosocial adjustment. Although 35% of children reported having experienced a recurrent dream during the past year, our hypothesis was only partially supported. Multivariate analyses revealed a marginally significant interaction between gender and recurrent dream presence and a significant main effect of gender. Univariate analyses revealed that boys reporting recurrent dreams reported significantly higher scores on reactive aggression than those who did not ($d = 0.58$). This suggests that by age 11 years, the presence of recurrent dreams may already reflect underlying emotional difficulties in boys but not necessarily in girls. Challenges in addressing this developmental question are discussed.

Keywords

recurrent dreams; children's dreams; psychosocial adjustment; aggression

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Progressive and repetitive patterns of thematic dream development have been observed when a series of remembered dreams is recorded, either within a single night or over a succession of nights. Progressive-sequential patterns of dream content, in which problems are stated, worked on, and sometimes resolved are associated with greater subjective well-being (e.g., Cartwright, 1986, 1991; Cartwright, Lloyd, Knight, & Trenholme, 1984; Kramer, 1993; Kramer, Whitman, Baldrige, & Lansky, 1964), whereas repetitive patterns have long been conceptualized as reflecting a lack of progress in recognizing and resolving daytime emotional preoccupations (e.g., Bonime, 1962; Cartwright, 1991; Domhoff, 1993; Fantz, 1987; Fosshage & Loew, 1987). These results are consistent with those of case studies describing positive changes in repetitive dream elements (e.g., toward a progressive pattern) as a function of successful psychotherapy (e.g., Bonime, 1962; Maultsby & Gram, 1974; Rossi, 1985).

One type of dream that clearly exemplifies the notion of repetition in oneiric content is the recurrent dream that is distinguished by its repetition as a remembered experience. Although not always operationalized, recurrent dreams are typically defined by researchers as a class of dreams that reoccur over time while maintaining not only the same theme, but the same content (Brown & Donderi, 1986; Heaton, Hill, Hess, Leotta, & Hoffman, 1998; Domhoff, 1993; Zadra, 1996; Zadra, Desjardins, & Marcotte, 2006). Recurrent dreams, which may depict salient preoccupations or stressors metaphorically over time, are known to be primarily unpleasant in nature (Cartwright, 1979; Robbins & Houshi, 1983; Robbins & Tanck, 1991; Zadra, 1996), and various data support the theory that they are associated with psychological stasis or the presence of continuing emotional concerns.

Robbins and Houshi (1983) found that undergraduate students who reported having a recurrent dream had moderately significantly higher scores on the Beck Depression Inventory and reported a significantly greater number of problems in their daily lives (e.g., difficulties at school, conflicts with their parents) than did undergraduate students who did not have recurrent dreams.

Brown and Donderi (1986) compared adult recurrent dreamers with people who had never experienced a recurrent dream and with people whose old recurrent dream had not recurred for at least one year (past recurrent dreamers). Participants completed a battery of tests to measure psychological well-being (e.g., anxiety, depression, personal adjustment) and recorded a 14-day sample of their own remembered dreams. Recurrent dreamers scored consistently lower than the other groups on measures of well-being. By comparison, the past-recurrent dreamers scored consistently higher than those without recurrent dreams on indices of well-being, suggesting that the maintained cessation of recurrent dreaming reflects an upturn in well-being.

Using the same methodology as in Brown and Donderi (1986) to study a younger group of adults, Zadra, O'Brien, and Donderi (1997) found that recurrent dreamers reported significantly higher levels of neuroticism, anxiety, depression, somatic symptomatology, and life-events stress, and significantly lower levels of personal adjustment.

Although very little descriptive or empirical research has been conducted on recurrent dreams over the past decade, the clinical and empirical findings reviewed above converge in indicating that repetitive dreams during adulthood may be reliable indicators of unresolved difficulties in the dreamer's life. The presence of recurrent dreams has never been directly assessed in children and thus whether similar associations exist in younger populations remains unknown. Extrapolating from the adult literature, one could hypothesize that children reporting recurrent dreams would score lower on measures of psychosocial adjustment than children without recurrent dreams.

The goal of the present study was to test this hypothesis by determining whether a link between psychosocial functioning and the presence of recurrent dreams could be observed in 11-year-old children. Because the prevalence of many behavioral problems differs as a function of gender (Costello, Mustillo, Erkanli, Keeler, & Angold, 2003), we expected that associations between the presence of recurrent dreams and specific behavioral problems would differ between boys and girls, with boys showing a greater association with externalizing problems and girls with internalizing problems.

METHOD

Participants

Participants were obtained from a longitudinal study focusing on social, psychological, and cognitive development of children in the province of Québec, Canada. The children come from all socioeconomic backgrounds of the urban areas of Montreal and Québec City. At the study's inception, 1,000 families were randomly selected from the Québec, 1996–1997 birth register (details on the epidemiological sampling plan can be found in Santé Québec, Desrosiers, & Tremblay, 1997). The initial sample that accepted to participate in the study was comprised of 572 children who were seen annually, the majority since the age of 5 months. Because of annual attrition, availability for yearly data collections, and budgetary constraints, 168 participated in the study at age 11.

Questionnaires and Measures

Assessment of Recurrent Dreams—Children were asked whether or not they experienced a recurrent dream in the past 12 months, and if applicable, to describe the dream's content. A recurrent dream was defined as a dream that, when recalled, gives you the impression that you had it before.

Measures of Psychosocial Adjustment—Children completed a questionnaire that assessed anxiety (e.g., You are nervous, high-strung or tense), opposition (e.g., Punishment doesn't make you change your behavior), shyness (e.g., You take a long time to warm up to children you don't know), nonaggressive behavioral problems (e.g., You destroy things belonging to your family or other young people), physical aggression (e.g., You physically attack people), reactive aggression (e.g., You react in an aggressive manner when someone takes something of yours [e.g., hit, push or slap another child]), proactive aggression (You scare other children to get what you want), indirect aggression (e.g., When you are mad at someone, you try to get others to dislike him/her), hyperactivity (e.g., You cannot settle on

anything for more than a few moments), inattention (e.g., You can't concentrate, you can't pay attention), social withdrawal (e.g., You prefer to play alone rather than with other children), and emotional problems (e.g., You have trouble enjoying yourself). These scales were drawn from, among others, the Preschool Behavior Questionnaire (Tremblay et al., 1992), the Child Behavior Checklist (Achenbach, Edelbrock, & Howell, 1987), and the reactive and proactive aggression questionnaire (Dodge & Coie, 1987). They are well validated (Baillargeon et al., 2007; Vaillancourt, Miller, Fagbemi, Côté, & Tremblay, 2007) and have been shown to be sensitive to environmental, perinatal, and familial risk and protective factors (Côté et al., 2007; Huijbregts, Séguin, Zoccolillo, Boivin, & Tremblay, 2007), as well as to early childhood sleep patterns (Touchette et al., 2007). Up until age 10 years, the full version of this instrument was completed by each child's mother. At age 11 years, a self-report abbreviated version of the same instrument was completed by the children.

Cronbach alphas and intraclass correlations between self-reported measures of psychosocial adjustment at age 11 years and those reported by the mother when the child was 10 years old are presented in Table 1. Cronbach alphas ranged from .37 for nonaggressive behavioral problems to .72 for physical aggression with an average value of .60 across scales. The alpha levels are generally acceptable given the small number of self-report items used per scale at age 11 years. The average intraclass correlations between self-report measures of psychosocial adjustment at age 11 years and those reported by the mother when the child was 10 was .33 with the weakest correlation (0) being found for shyness, an internalizing behavior, and the highest (.57) for hyperactivity, an externalizing behavior. The wide range in strength of intraclass correlations is consistent with the finding that the level of parent-child agreement for these types of measures tends to be relatively weak (Grills & Ollendick, 2002). Furthermore, in addition to being sensitive to different observers, the size of the intraclass correlation may also reflect behavior changes over time.

Procedure

An invitation to participate in the study along with a consent form was first mailed to the parents or person responsible for the child. After consenting to the study, a research coordinator made an appointment with the family. A research assistant then met with each child and read the study questions to the child. Children were told that their answers were confidential and that they could ask for clarifications whenever needed. The project was approved by the Research Ethics Committee of the Ste-Justine Hospital Research Center and conforms to the guidelines of the American Psychological Association (2002).

Analyses

General Linear Model multivariate analyses (GLM-MANOVA) were performed to test the hypothesis that children with recurrent dreams differ from children without recurrent dreams on measures of psychosocial adjustment while minimizing Type I error. Interactions between gender and the presence or absence of recurrent dreams were also examined to test for invariance across boys and girls.

RESULTS

Fifty-nine of the 168 children tested (35.1%) reported on the dream questionnaire that they had experienced a recurrent dream during that past year. There was no significant difference in the proportion of boys (32%) and girls (38%) who reported having a recurrent dream.

The multivariate interaction effect between gender and recurrent dream presence was significant at $p < .10$: Pillai's Trace = 0.13, $F(13, 151) = 1.69$, $p = .068$, explaining 13% of the variance in scores of psychosocial adjustment. The multivariate main effect of gender effect was significant: Pillai's Trace = 0.18, $F(13, 151) = 2.6$, $p < .01$, explaining 18% of the variance in scores of psychosocial adjustment. The multivariate main effect of recurrent dream presence was not significant: Pillai's trace = 0.075, $F(13, 151) = .94$, $p = .52$.

Results from the univariate analyses are presented in Table 2. Although most significant effects were attributable to a main effect of gender, that is, prosocial behavior and nonaggressive behavior problems, the effect for reactive aggression was associated with the presence of recurrent dreams and could not be properly interpreted without taking into account the significant univariate interaction between gender and presence of recurrent dreams $F(1, 163) = 4.63$, $p = .03$, $\eta^2 = .028$. Bonferroni post hoc analyses revealed a simple effect for boys, $F(1, 163) = 10.05$, $p < .002$, indicating that boys reporting recurrent dreams scored significantly higher on reactive aggression than those who did not (Cohen's (1992) $d = 0.58$, which is a moderate effect size, as opposed to $d = 0.05$ in girls). There was a main effect for gender on reactive aggression, $F(1, 163) = 7.46$, $p = .017$, $\eta^2 = .034$, with boys ($M = 5.0$, $SD = 1.4$) showing significantly higher levels than girls ($M = 4.6$, $SD = 0.97$). Finally, there was also a univariate main effect for presence of recurrent dreams for reactive aggression $F(1, 163) = 5.77$, $p = .017$, $\eta^2 = .034$, indicating that children with recurrent dreams ($M = 5.6$, $SD = 1.86$) had higher levels of reactive aggression than children who did not report recurrent dreams ($M = 4.7$, $SD = 1.04$).

DISCUSSION

The hypothesis that the presence of recurrent dreams in children is associated with poorer psychosocial adjustment was partially supported. In our current sample, boys who reported experiencing recurrent dreams scored higher on measures of reactive aggressiveness than those who did not have recurrent dreams. Reactive aggression, as opposed to proactive aggression, which would be driven by reward seeking motivations, is defined as a defensive reaction to a stimulus which is perceived as threatening (Dodge & Coie, 1987; Kempes, Matthys, De Vries, & Van Engeland, 2005). Reactively aggressive children frequently experience problems of adjustment in their peer relations and show social interpretation deficits and a hostile attention bias (De Castro, Merk, Koops, Veerman, & Bosch, 2005; Dodge & Coie, 1987; Dodge, Lochman, Harnish, Bates, & Pettit, 1997). The sensitivity of recurrent dreams with reactive aggression is consistent with the observation that disturbed dreaming is associated with a disposition to experience distressing and highly reactive emotions (Levin & Nielsen, 2007). Although this association has been mainly studied in the context of highly disturbing dreams such as nightmares, it may well be applicable to recurrent dreams.

Our other measures of psychosocial adjustment did not discriminate between children with and without recurrent dreams indicating that at age 11 years, the occurrence of recurrent dreams may not be related to various dimensions of psychosocial adjustment. However, unspecified developmental and methodological factors may alter the range and strength of such relations over time. From a developmental perspective, dream content (and possibly any adaptive functions attributed to it) is known to undergo significant changes from preschool to teen years (Foulkes, 1982, 1999; Foulkes et al., 1990; Strauch, 2005; Strauch & Lederbogen, 1999), whereas it remains relatively stable after late adolescence (e.g., Domhoff, 1996). Dream content thus follows a developmental course that parallels cognitive and emotional maturation before reflecting the stability of adult personality. Foulkes' (1982) longitudinal laboratory study of children showed that it was only around the ages of 11–13 years that their dreams began to resemble those of adults on a number of key dimensions (e.g., frequency, length, emotions, overall structure) or to show links to their personality. It is thus possible that the nature and correlates of recurrent dreams similarly evolve throughout childhood. If this is correct, then the recurrent dreams reported by our 11-year-old children may just be beginning to show associations to difficulties in their waking life and the study of recurrent dreams in older teenagers (e.g., at ages 13, 15, and 17) could prove to be particularly informative. Finally the link we found in boys but not girls may reflect the fact that between the ages of 9 and 13 years, boys are 35% more likely than girls to experience behavioral and/or emotional problems (Costello et al., 2003).

In addition, the length of time during which people experience recurrent dreams may also be related to psychosocial adjustment. We did not assess the history of recurrent dream experiences in our study, but given the subjects' young age, recurrent dream duration was almost certainly shorter than the average duration for adult recurrent dreams (e.g., 8 years in Brown and Donderi's (1986) sample of adults recurrent dreamers).

Another developmental factor that must be considered is that in comparison to adult populations, 11-year-old children may have a more limited or restricted capacity to assess introspective experiences as acquisition of emotional comprehension is known to extend across child development (Saarni & Harris, 1989). In addition, emotional understanding can vary between children of the same age. Children who suffer from psychological distress (such as self-reported or clinician-reported symptoms and difficulties) can also show a deficit in emotional self-understanding (Southam-Gerow & Kendall, 2002). Hence, it is possible that children with a lower level of psychosocial adjustment are more prone to experience difficulties in understanding their emotions, thereby impacting self-report measures of psychosocial adjustment. Finally, at a methodological level, some of the children who took part in our study may have had difficulties understanding the questions being asked concerning the concept of a recurrent dream, although they were free to ask the research assistant for clarifications throughout the testing procedure. For instance, one study (Breton et al., 1995) found that only 42% of 11-year-old children understood the questions of the Diagnosis Interview Schedule for Children (DISC, Version 2.25). Future studies could consider the adjunctive use of vignettes to enhance children's understanding of these key concepts (Muris, Merckelbach, Gadet, & Moulart, 2000).

Many of the aforementioned issues and limitations could be examined in developmental or longitudinal studies of psychosocial adjustment in relation to dream content and recurrent dream presence across different age groups. A longitudinal approach would also permit the investigation of the emergence, duration and cessation of recurrent dreams and their association with levels of psychosocial adjustment across time. In addition, efforts should be made to collect descriptions of participants' recurrent dreams so that their actual contents (e.g., main themes, characters, social interactions, emotions) could be investigated from developmental or other age-related perspectives. The inclusion of measures of emotional comprehension, cognitive and mnemonic capacities could also be considered.

In sum, this study was the first to examine the link between recurrent dreams during childhood and associated levels of psychosocial adjustment. The data suggest that by age 11 years, the presence of recurrent dreams may already reflect underlying emotional difficulties in boys, but not in girls. The association found in boys is consistent with what has been described in adult populations. These findings also add to the existing literature showing that more severe forms of disturbed dreaming (i.e., frequent bad dreams and nightmares) during childhood are associated with a range of negative symptoms, including difficult temperament and anxiety disorders (Nielsen et al., 2000; Simard, Nielsen, Tremblay, Boivin, & Montplaisir, 2008). However, how relations between repetitive dream content and waking adjustment evolve over time remains to be determined.

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Table 1

Scale Reliabilities, Intraclass Correlations Between Self-Reported Measures of Psychosocial Adjustment at Age 11 Years and Those Obtained From the Mother When the Child Was 10 Years Old

Scales	Cronbach α	Number of items	Intraclass correlations
Indirect aggression	0.57	3	0.21
Physical aggression	0.72	4	0.51 ^{***}
Reactive aggression	0.65	4	0.24 [*]
Proactive aggression	0.43	3	0
Anxiety	0.68	4	0.38 [*]
Prosociality	0.77	3	0
Hyperactivity	0.64	4	0.54 ^{***}
Inattention	0.69	3	0.57 ^{***}
Opposition	0.44	3	0.46 ^{***}
Social withdrawal	0.67	3	0.54 ^{***}
Shyness	0.48	3	0
Nonaggressive behavior problems	0.37	5	0.35 ^{**}
Emotional problems	0.62	3	0.44 ^{***}

^{*}
 $p < .05$.

^{**}
 $p < .01$.

^{***}
 $p < .001$.

Table 2

Overall Univariate Effects of Recurrent Dream Presence for Measures of Psychosocial Adjustment

Psychosocial adjustment measures	<i>F</i>	<i>p</i>	<i>R</i> ²
Indirect aggression	1.01	.39	0.02
Physical aggression	2.56	.06	0.04
Reactive aggression	4.74	<.005	0.08
Proactive aggression	0.67	.57	0.01
Anxiety	0.89	.45	0.02
Prosociality	4.13	<.05	0.07
Hyperactivity	0.88	.45	0.02
Inattention	1.92	.13	0.03
Opposition	1.10	.35	0.02
Social withdrawal	0.17	.91	0.00
Shyness	0.97	.41	0.02
Nonaggressive behavior problems	3.09	<.05	0.05
Emotional problems	1.15	.33	0.02