

Shorter communication

Nighttime fears of children and adolescents: Frequency, content, severity, harm expectations, disclosure, and coping behaviours

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Abstract

The present school-based study investigated the nighttime fears of 511 children and adolescents, aged 8–16 years. Participants were assessed using a structured interview about the frequency, content, severity, harm expectations, coping strategies, and disclosure of nighttime fears. Results indicated that nighttime fears are a common experience, with nearly two-thirds (64.2%) of children and adolescents reporting nighttime fears. Fear of intruders/home invasion was the most frequently reported nighttime fear. Females more frequently reported nighttime fears than males (72.9% and 54.6%, respectively) and a greater number of children reported nighttime fears compared to adolescents (79.4% and 48.8%, respectively). Nighttime fears were given moderate severity ratings, and harm expectations were most strongly associated with ‘personal security’ fears. Respondents reported a variety of coping strategies to manage their nighttime fears with self-control/distraction techniques being the most common. Most respondents reported disclosing their nighttime fear(s) to another person. The clinical implications of these findings and the methodological limitations are discussed.

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Introduction

Nighttime fears are normal reactions to real or imagined threats at night, and have been cited in the medical, psychiatric, and normative fear literature since the time of Hippocrates in 460–370 BC (Gordon, 2004; Treffers & Silverman, 2001). Described as a ‘heterogeneous class of fears’, such nocturnal fears comprise a broader content than simply a fear of darkness, including fears of bad dreams, nightmares, noises, shadows, monsters, intruders, burglars, kidnappers, and of being left alone at night (Gordon, King, Gullone, Muris, & Ollendick, 2007; King, Ollendick, & Tonge, 1997). Although there has been much research on the fears of

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children and adolescents (Craske, 1997; Gullone, 2000; Westenberg, Drewes, Goedhart, Siebelink, & Treffers, 2004), surprisingly little work has addressed the fears of children at night, particularly for adolescents.

Most children and adolescents appear to overcome or outgrow nighttime fears, however, others experience persistent and severe nighttime fears that interfere with their daily functioning, and cause much discomfort for both the child/adolescent and family (Gordon & King, 2002). For example, in a community survey of parent-reported sleep problems of 989 elementary school children, Blader, Koplewicz, Abikoff, and Foley (1997) found that sleep onset problems were correlated with more nighttime fears, night waking, psychiatric and medical conditions, the need for reassurance and caregiver proximity, and a history of sleep problems. In an epidemiologic study of 776 young people, Pine, Cohen, and Brook (2001) reported that fear of the dark specifically and overall level of fears in adolescence more generally were predictive of future risk for major depression. Clearly, nighttime fears are not trivial and require further research investigation (Gordon & King, 2002).

In a sample of 54 unselected normal American children between 4 and 12 years of age, Bauer (1976) found that 74% of 4–6 year olds, 53% of 6–8 year olds, and 55% of 10–12 year olds reported fears of ghosts and monsters. ‘Bedtime fears’ were reported by 53%, 67%, and 35% of the three age groups, while ‘frightening dreams’ were endorsed by 74%, 80%, and 45% of three groups, respectively. Such developmental progression of ‘normal’ fears is thought to reflect the emerging cognitive and representational capabilities of the child (Gullone, 2000; King et al., 1997; King, Hamilton, & Ollendick, 1988). With regard to gender differences, Bauer (1976) noted that girls more frequently reported nighttime fears (i.e., frightening dreams, bedtime fears) than boys. This was especially so for 10–12 year olds.

More recently, Muris and colleagues investigated nighttime fears in 176 normal school aged 4–12 years in the Netherlands (Muris, Merckelbach, Ollendick, King, & Bogie, 2001). Children and parents were interviewed about the frequency, content, origins, coping behaviours, and severity of children’s nighttime fears. Results showed that 73.3% of children reported nighttime fears confirming the suspected high prevalence of such fears. Developmental patterns were also evident, with 58.8% of 4–6 year olds, 84.7% of 7–9 year olds, and 79.6% of 10–12 year olds reporting nighttime fears. Fears of scary dreams and imaginary creatures decreased with age, while fears of frightening thoughts and personal harm increased with age. However, significant gender differences were not found. In relation to origins, nearly 80% of children attributed their fears to negative information: conditioning and modelling were endorsed less frequently (25.6% and 13.2%, respectively). Children reported a variety of coping strategies and generally rated these strategies as helpful in reducing anxiety. Moreover, in about 10% of the children, nighttime fears were related to one or more anxiety disorders following criteria of the *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed. *DSM-III-R*; American Psychiatric Association, 1987): separation anxiety disorder (6.3%), over-anxious disorder (4.4%), animal phobias (1.9%), and environmental phobias (1.3%). Finally, parent reports substantially deviated from children’s reports. In particular, parents provided a marked underestimation of nighttime fears (see also Muris, Merckelbach, Gadet, & Moulart, 2000).

Although advances are apparent in the study of nighttime fears in children, the methodological limitations of past research need acknowledgement (Gordon et al., 2007). These include relatively small sample sizes, a limited age range of participants, as well as the most recent studies being restricted to the Netherlands (e.g., Muris et al., 2001). In particular, there has been no investigation comparing the frequency and content of nighttime fears in children and adolescents. The present Australian investigation addresses these limitations and examines developmental and gender-related patterns of normal nighttime fear prevalence, content, severity, and coping behaviours in a large school-based sample of children and adolescents. Not yet previously explored, this investigation also examines harm expectations of the children and adolescents, and disclosure patterns of nocturnal fears.

Consistent with the Muris et al. (2001) study, information was collected via a structured interview rather than traditional fear survey schedules which define how children and adolescents respond through a predetermined factor structure (Essau & Barrett, 2001). The “response freedom” of the interview is ideal for the exploration of nighttime fears in children and youth and using the same methodology allows for valid comparison of findings with the Muris et al. (2001) Netherlands study. The broad age range of children and adolescents (i.e., 8–16 years), investigated in this study is unique. This is the first large, systematic study of nighttime fears in children and adolescents to be carried out in Australia.

Method

Participants

The sample initially comprised 514 children and adolescents aged between 8 and 16 years. As three children did not complete their interviews due to conflicting commitments, the final sample consisted of 511 participants. The sample was divided into children (8–12 years, $n = 257$, 128 females, 129 males) and adolescents (13–16 years, $n = 254$, 141 females, 113 males).

The sample was drawn from 24 Catholic and independent schools across Victoria, Australia. Participation in the study was voluntary. The study was approved by the University Science and Ethics Committee in addition to the school authorities. Explanatory statements and consent forms were distributed to parents through students. Informed consent was obtained from parents and students. Not inconsistent with other large survey studies, the average return rate of consent forms was 10%, ranging widely from 3% to 28%.

Interview

The interview comprised a structured format, with questions adapted from Muris, Merckelbach, and Collaris (1997) and Muris et al. (2001). Firstly, the subject was asked: ‘How often are you fearful at night?’ (frequency; 1 = never, 2 = sometimes, 3 = often). Individuals who indicated that nighttime fears were present (i.e., answered with ‘sometimes’ or ‘often’ to the frequency question) were invited to provide details about the content, severity, and harm expectations of their individual nighttime fears: ‘What are you afraid of at night? Anything else?’ (content; up to four nighttime fears were listed); ‘How anxious are you of ... [the content of the fear]?’ (severity; 1 = not at all anxious, 2 = anxious, or 3 = very anxious); and ‘Do you think you could be hurt or killed by... [the content of the fear]?’ (harm expectations; yes or no). Participants were then asked to describe the coping strategies they used in response to their nighttime fears, and to rate the effectiveness of each of these strategies: ‘What did you do when you were anxious at night? Anything else?’ (coping strategies; up to four coping strategies were listed); and ‘How much does... [the coping strategy] help you to become less anxious? Finally, the children and adolescents were asked whether they had disclosed their fears, and to whom: ‘Did you tell anyone about this fear?’ (disclosure; yes or no); and ‘Who did you tell?’ (recipient of disclosure; mother, father, teacher, sibling, friend, or other).

Procedure

Interviews were carried out in schools. The first author, a registered psychologist with 10 years experience in child and adolescent counselling psychology, conducted the interviews. The average duration of the interview was approximately 10 min, depending on the age of the child/adolescent and the number of nighttime fears acknowledged.

Data analysis

Data were analysed using the Statistical Package for the Social Sciences (SPSS), Version 11.5. Chi-square tests and Mann–Whitney U tests were performed to test for significant differences between gender and the two age groups (Siegal, 1956). Linear regression techniques were also utilised for the analysis of developmental fear frequency data (Keppel, 1982).

Results

Frequency of nighttime fears

As shown in Table 1, approximately two-thirds of the total sample ($n = 328$, 64.2%) reported some degree of nighttime fear. Of those children and adolescents reporting nighttime fears, 54.0% ($n = 276$) reported occasional fears (‘sometimes’), and 10.2% ($n = 52$) reported very frequent fears (‘often’). Significantly more

Table 1
Frequency of nighttime fears by age group and gender

Nighttime fear	Total group $N = 511$ frequency (%)	8–12 years $n = 257$ frequency (%)	13–16 years $n = 254$ frequency (%)	Males $n = 242$ frequency (%)	Females $n = 269$ frequency (%)
Never	183 (35.8)	53 (20.6)	130 (51.2)*	110 (45.4)	73 (27.1)*
Sometimes	276 (54.0)	157 (61.1)	119 (46.8)*	119 (49.2)	157 (58.4)
Often	52 (10.2)	47 (18.3)	5 (2.0)*	13 (5.4)	39 (14.5)*
No	183 (35.8)	53 (20.6)	130 (51.2)*	110 (45.4)	73 (27.1)*
Yes	328 (64.2)	204 (79.4)	124 (48.8)*	132 (54.6)	196 (72.0)*

*indicates $p < 0.05$.

Table 2
Frequency of nighttime fears by age group and gender in each fear category

Nighttime fear category	Total group $N = 511$ frequency (%)	8–12 years $n = 257$ frequency (%)	13–16 years $n = 254$ frequency (%)	Males $n = 242$ frequency (%)	Females $n = 269$ frequency (%)
Environmental threats	94 (18.4)	48 (18.7)	46 (18.1)	35 (14.5)	59 (21.9)*
Personal security	88 (17.2)	56 (21.8)	32 (12.6)*	36 (14.9)	52 (19.3)
Frightening dreams	45 (8.8)	39 (15.2)	6 (2.4)*	19 (7.9)	26 (9.7)
Darkness	29 (5.7)	13 (5.1)	16 (6.3)	12 (5.0)	17 (6.3)
Imaginary creatures	27 (5.3)	22 (8.6)	5 (2.0)*	13 (5.4)	14 (5.2)
Family/friends security	18 (3.5)	11 (4.3)	7 (2.8)	5 (2.1)	13 (4.8)
Insects and animals	14 (2.7)	11 (4.3)	3 (1.2)*	8 (3.3)	6 (2.2)
Worry about day's events	13 (2.5)	4 (1.6)	9 (3.4)	4 (1.7)	9 (3.3)
No fear	183 (35.8)	53 (20.6)	130 (51.2)*	110 (45.5)	73 (27.1)*

*indicates $p < 0.05$.

children ($n = 204$, 79.4%) than adolescents ($n = 124$, 48.8%) reported nighttime fears [$\chi^2(1) = 51.89$, $p < 0.01$]. Also, significantly more females ($n = 196$, 72.9%) than males ($n = 132$, 54.6%) reported nighttime fears [$\chi^2(1) = 6.66$, $p < 0.01$].

Of those children and adolescents reporting any nighttime fears, most (58%) reported only one nighttime fear, with 28.1%, 11.2%, and 3.2% of the sample endorsing two, three, and four nighttime fears, respectively. An unstandardised bivariate regression coefficient model was used to estimate the average linear decrease in frequency of nighttime fears associated with age. An average decrease of about two nighttime fears was found for every year (b , the slope coefficient = -1.90 , $SE = 0.65$, $R^2 = 0.55$).

Content of nighttime fears

Overall, children and adolescents reported 34 different nighttime fears (see Table 2). Fears were classified into eight main categories following Mooney (1985) and Muris et al. (2001). The most frequent nighttime fears related to 'environmental threats' (18.4%, $n = 94$, e.g., inside or outside noises), and 'personal security' (17.2%, $n = 88$, e.g., intruders) followed by 'frightening dreams' (8.8%; $n = 45$, e.g., fear of bad dreams), 'darkness' (5.7%, $n = 29$, e.g., fear of the dark), 'imaginary creatures' (5.3%, $n = 27$; e.g., ghosts, skeletons, witches, or spooks), 'family and friends security' (3.5%, $n = 18$; e.g., worry about family's safety), 'insects and animals' (2.7%, $n = 14$; e.g., spiders), and finally 'worry about day's events' (2.5%, $n = 13$). Children endorsed significantly more 'personal security', 'frightening dreams', 'imaginary creatures' and 'insects and animals' related fears compared to adolescents [$\chi^2(1) = 6.27$, $p < 0.05$; $\chi^2(1) = 23.81$, $p < 0.01$; $\chi^2(1) = 10.51$,

$p < 0.01$; and $\chi^2(1) = 4.48, p < 0.05$, respectively]. Females reported significantly more ‘environmental threats’ than males [$\chi^2(1) = 3.86, p < 0.05$].

Fear severity and harm expectations

Participants reported moderate levels of anxiety about their nighttime fears with male and females reporting similar severity ratings ($M = 2.2, SD = 0.5; M = 2.1, SD = 0.5$, respectively). Severity ratings for children ($M = 2.3, SD = 0.6$) were significantly higher than those for adolescents ($M = 2.1, SD = 0.5$) ($U = 11,869.0, p < 0.05$). Harm expectations were most frequently endorsed for ‘personal security’ fears ($n = 68, 43\%$), followed by ‘environmental threats’ ($n = 29, 18.3\%$), ‘frightening dreams’ ($n = 19, 12.1\%$), ‘darkness’ ($n = 8, 5.1\%$), ‘imaginary creatures’ ($n = 14, 8.9\%$), ‘family/friend security’ ($n = 6, 3.8\%$), ‘insect and animals’ ($n = 10, 6.4\%$), and finally, ‘worry about day’s events’ ($n = 3, 1.9\%$) (see Table 3).

Coping behaviours

Children and adolescents reported a range of activities to cope with their nocturnal fears (see Table 4). Coping behaviours were classified following Mooney (1985) and Mooney, Graziano, and Katz (1984). ‘Self-control/distraction’ ($n = 183, 55.8\%$; e.g., ‘ignore or think of other things’), and ‘social support’ ($n = 71, 21.6\%$; e.g., ‘go into parents and talk to them’) were the most frequently reported types of coping strategies. Less frequently endorsed strategies included ‘control over inanimate environment’ ($n = 37, 11.3\%$; e.g., ‘turn

Table 3
Harm expectations for nighttime fears by gender and age group

Nighttime fear category	Total group $n = 328$ frequency (%)	8–12 years $n = 204$ frequency (%)	13–16 years $n = 124$ frequency (%)	Males $n = 132$ frequency (%)	Females $n = 196$ frequency (%)
Environmental threats	29 (18.5)	16 (14.4)	13 (28.2)	13 (19.1)	16 (18.0)
Personal security	68 (43.3)	48 (43.2)	20 (43.5)	30 (44.1)	38 (42.7)
Frightening dreams	19 (12.1)	16 (14.4)	3 (6.5)	7 (10.3)	12 (13.5)
Darkness	8 (5.1)	4 (3.6)	4 (8.7)	2 (2.9)	6 (6.7)
Imaginary creatures	14 (8.9)	13 (11.7)	1 (2.2)	6 (8.8)	8 (9.0)
Family/friend’s security	6 (3.8)	4 (3.6)	2 (4.4)	2 (2.9)	4 (4.5)
Insects and animals	10 (6.4)	9 (8.1)	1 (2.2)	7 (10.3)	3 (3.4)
Worry about day’s events	3 (1.9)	1 (0.9)	2 (4.4)	1 (1.5)	2 (2.3)
Totals	157 (100)	111 (100)	46 (100)	68 (100)	89 (100)

*indicates $p < 0.05$.

Table 4
Coping behaviours by age group and gender

Nighttime coping behaviour	Total group $n = 328$ frequency (%)	8–12 years $n = 204$ frequency (%)	13–16 years $n = 124$ frequency (%)	Males $n = 132$ frequency (%)	Females $n = 196$ frequency (%)
Self-control/distraction	183 (55.8)	102 (50.0)	81 (65.3)	70 (53.0)	113 (57.7)
Social support	71 (21.6)	57 (27.9)	14 (11.3)*	30 (22.7)	41 (20.9)
Clinging to inanimate objects	22 (6.7)	19 (9.3)	3 (2.4)*	10 (7.6)	12 (6.1)
Control over inanimate environment	37 (11.3)	18 (8.8)	19 (15.3)	14 (10.6)	23 (11.7)
Control over others	9 (2.7)	4 (2.0)	5 (4.0)	7 (5.3)	2 (1.0)
Prayer	5 (1.5)	3 (1.5)	2 (1.6)	1 (0.8)	4 (2.0)
Do not know	1 (0.3)	1 (0.5)	0 (0)	0 (0)	1 (0.5)
Totals	328 (100)	204 (100)	124 (100)	132 (100)	196 (100)

*indicates $p < 0.05$.

on a light or use a torch'), 'clinging to inanimate objects' ($n = 22$, 6.7%; e.g., 'hug soft toys'), 'control over others' ($n = 9$, 2.7%; e.g., 'ask parent for a drink'), 'prayer' ($n = 5$, 1.5%), and finally 'do not know' ($n = 1$, 0.3%). As shown in Table 4, reports of 'social support' and 'clinging to inanimate objects' coping behaviours were significantly more prevalent strategies for children compared to adolescents [$\chi^2(1) = 9.88$, $p < 0.01$; $\chi^2(1) = 5.47$, $p < 0.05$, respectively).

Disclosure of nighttime fears

Sixty eight percent of the sample reported that they had disclosed their nighttime fears to another person. The recipient of the disclosure was usually the mother ($n = 198$, 50.4%), followed by the father ($n = 151$, 38.4%), a friend ($n = 23$, 5.9%), a sibling ($n = 10$, 2.5%), another person such as a relative ($n = 9$, 2.3%), and finally a teacher ($n = 2$, 0.5%).

Discussion

The present Australian study reports the nighttime fears of 511 children and adolescents, aged 8–16 years. Nighttime fears were assessed using a structured interview. Overall, our results indicate that nighttime fears are very common, with 64.2% of the sample reporting occasional or frequent fears. As anticipated, the frequency of nighttime fears is influenced by age with significantly more children reporting fears than adolescents (79.4% and 48.8%, respectively). This developmental pattern builds on the recent findings of Muris et al. (2001) in the Netherlands in which 73.3% of children reported nighttime fears. The results are also consistent with the findings of many cross-sectional studies with children and adolescents that show marked age effects, using self-report fear survey schedules (e.g., Gullone & King, 1992, 1993; King, Ollier et al., 1989; Ollendick, 1983; Ollendick, King, & Frary, 1989). Also as anticipated, and consistent with normative fear studies showing gender differences (Gullone, 2000; Gullone & King, 1993; Ollendick et al., 1989), significantly more females reported nighttime fears than males (72.9% and 54.6%, respectively).

Consistent with the findings from the Dutch study (Muris et al., 2001), a diversity of nighttime fears were reported by Australian children and adolescents. The 10 most common nighttime fears included: fears of intruders/home invasion, noises outside the house, bad dreams, noises inside the house, ghosts, skeletons, witches or spooks, weather noises, worry about daily events, darkness, being alone in the dark, spiders or insects, shadows in the room, and worry about the family's safety at night. Nighttime fears concerning 'environmental threats', 'personal security', and 'frightening dreams' had the highest prevalence. Females reported more fears than males for 'environmental threats.' Children differed from adolescents in their nighttime fear pattern reporting more fears in relation to 'personal security', 'frightening dreams', 'imaginary creatures', and 'animals and insects'. Importantly, the specific nighttime fear categories of 'environmental threats', 'darkness', 'family/friend's security', and 'worry about daily events' were *not* age related. These latter categories of fear characterized both children and adolescents. These particular fears appear to be pervasive in nature and may be less affected by emerging cognitive processes. Such findings lend support to Seligman's (1971) initial proposal that children are biologically prepared from a young age to be fearful of potentially life-threatening situations, such as darkness and the unknown (Gullone & King, 1997; King et al., 1997).

Moderate levels of anxiety were reported in relation to fear severity. Harm expectations and the perception of physical danger were most frequently endorsed by children and adolescents in relation to 'personal security' fears, which included fear of intruders/home invasion. Consistent with the Muris et al. (2001) findings, a range of coping behaviours were reported in relation to nighttime fears, with 'self-control/distraction' and 'social support' being most frequent. Age effects were evident as shown, for example, in the significantly greater use of social support and clinging to inanimate objects on the part of children. Interestingly, nighttime fears were disclosed by over two-thirds of the sample to another person, most frequently to the mother and father.

The marked age-related differences in the prevalence and type of nighttime fears are a likely reflection of differences in cognitive/verbal development and physical maturation across children and adolescents (King, Cranstoun, & Josephs, 1989; King, Ollier et al., 1989; Ollendick et al., 1989). With regard to gender differences, findings in relation to normative fears have typically been challenged on the grounds that they may be due to differences in sex role expectations where females are socialised to be more fearful than males,

and perhaps reinforced for reporting their inner fears and worries more than males (Craske, 2003; Gullone, 2000; Ollendick, Yule, & Ollier, 1991). Understanding age and gender differences in nighttime fears remain a major challenge for researchers.

Another issue not yet tackled by researchers is how nocturnal fears compare with daytime fears in children and adolescents. Fear research has commonly employed structured fear survey schedules that assess fear responses across a range of situations/events, such as the Fear Survey Schedule for Children—Revised (FSSC-R) and the Fear Survey Schedule for Children-Revised/II (FSSC-R/II; Gullone & King, 1992; Gullone & Lane, 2002; Ollendick, 1983; Ollendick et al., 1989). Analogous to the findings of nighttime fears in interview studies, results using fear survey schedules consistently show that the most common general fears of youth are related to situations involving danger and death. For example, Gullone, Cummins, and King (1996) reported the following FSSC-II items (likewise, Gullone and King (1993) reported nearly identical items albeit in a different order) as the top 10 fears for non-clinical children, aged between 7 and 18 years: ‘fears of not being able to breathe’, ‘being threatened with a gun’, ‘being kidnapped’, ‘AIDS’, ‘taking dangerous drugs’, ‘someone in my family dying’, ‘nuclear war’, ‘murderers’, ‘being hit by a car or truck’, ‘myself dying’, ‘someone in my family having an accident, and sharks’. Many of the FSSC-R/II items could be related to either day and/or night situations, depending on the context of the child’s fear. FSSC-R/II endorsements could also be reflective of both the actual fear *and* the perception of threat, the latter more likely being a function of children’s trait anxiety levels (Muris et al., 2002). As noted by Schaller, Park, and Mueller (2003): “whereas light may be reassuring, ambient darkness can arouse fear.[...]darkness may cause dispositionally wary individuals to be even warier of potential dangers in the world” (p. 639).

Three clinical implications arise from this study. Firstly, the many findings relating to developmental differences (e.g., Gullone, 2000; Westenberg, Siebelink, & Treffers, 2001) underline the need to consider emerging cognitive–verbal and psychosocial functioning skills of children and adolescents when undertaking an assessment of nighttime fears. Secondly, it is evident that structured interviews are useful for the assessment of nighttime fears of children and adolescents. This supports the recommendations made by King et al. (1997) including the use of a multi-method, multi-informant clinical assessment approach that incorporates an interview with the child/adolescent, parents, and/or family members to obtain a comprehensive history of the specific nighttime fear(s) of concern. Self-report instruments, such as the FSSC-R and the FSSC-R/II, are useful with their predetermined fear structures for identifying specific fear and anxiety producing stimuli in children and youth. Diagnostic interviews (see for example, Silverman & Albano, 1996) can also be used with the child/adolescent and parents to help identify specific anxiety and phobic disorders. Individualised multi-component treatment for the child/adolescent and family can subsequently be devised and implemented (Gordon et al., 2007; Mooney & Sobocinski, 1995). Evaluations of behavioural/cognitive–behavioural interventions, using multiple-baseline and between group designs, confirm that interventions are highly efficient in the treatment of severe nighttime fears (e.g., Friedman & Ollendick, 1989; Graziano & Mooney, 1980, 1982; King, Cranstoun et al., 1989). Lastly, clinicians should be aware of the diagnostic status of children’s nighttime fears, and the need for DSM-based assessment for specific phobia, and indeed other anxiety disorders.

In conclusion, notwithstanding the contributions made by the current study in better understanding the nighttime fears of children and adolescents, four methodological shortcomings of this study must be acknowledged. Firstly, with structured interviews, it is possible that the interviewers may interpret responses within their own value system and expectancies rather than the respondent’s frame of reference, referred to as ‘expectancy effects’ (Gullone, 2000). Secondly, due to school time scheduling constraints, it is acknowledged that the investigation did not include parents/caregivers or teachers, as recommended in multi-informant assessment (Fonseca & Perrin, 2001; King et al., 1997; Ollendick & Hersen, 1984). Thirdly, the sample of children was mainly recruited from Catholic schools and the consent rate for participation in this study was low. As there was a possibility of parental consent bias, this calls into question the representativeness of the sample. However, the sample did include families across all socioeconomic levels. Fourthly, a cross-sectional design was followed which requires cautious interpretation of age differences (King, Cranstoun et al., 1989; King, Ollier et al., 1989; King et al., 1997; Muris et al., 2001; Ollendick et al., 1989). Further research incorporating longitudinal data would enable assessment of the stability and continuity of severity for nighttime fears. Such research would also be useful in determining the predictive importance of nighttime fears for the later development of anxiety disorders (Ollendick & King, 1994).

References

- American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders* (3rd ed. revised). Washington, DC: Author.
- Bauer, D. H. (1976). An exploratory study of developmental changes in children's fears. *Journal of Child Psychology and Psychiatry*, *17*, 69–74.
- Blader, J. C., Koplewicz, H. S., Abikoff, H., & Foley, C. (1997). Sleep problems of elementary school children: A community survey. *Archives of Pediatric Adolescent Medicine*, *151*, 473–480.
- Craske, M. G. (1997). Fear and anxiety in children and adolescents. *Bulletin of the Menninger Clinic*, *61*, A4–A36.
- Craske, M. G. (2003). *Origins of phobias and anxiety disorders: Why more women than males?*. US: Elsevier.
- Essau, C. A., & Barrett, P. (2001). Developmental issues in the assessment of anxiety. In C. A. Essau, & F. Petermann (Eds.), *Anxiety disorders in children and adolescents* (pp. 75–110). East Sussex: Brunner-Routledge.
- Fonseca, A. C., & Perrin, S. (2001). Clinical phenomenology, classification and assessment of anxiety disorders in children and adolescents. In W. K. Silverman, & P. D. Treffers (Eds.), *Anxiety disorders in children and adolescents: Research, assessment and intervention* (pp. 126–158). Cambridge: Cambridge University Press.
- Friedman, A. G., & Ollendick, T. H. (1989). Treatment programs for severe night-time fears: A methodological note. *Journal of Behavior Therapy and Experimental Psychiatry*, *20*, 171–178.
- Gordon, J. (2004). *Nighttime fears in children: Origins, frequency, content and severity*. Doctoral dissertation, Clayton, Victoria, Australia: Monash University.
- Gordon, J., & King, N. (2002). Children's night-time fears: An overview. *Counselling Psychology Quarterly*, *15*, 121–132.
- Gordon, J., King, N., Gullone, E., Muris, P., & Ollendick, T. H. (2007). Treatment of children's nighttime fears: The need for a modern randomised controlled trial. *Clinical Psychology Review*, *1*, 98–113.
- Graziano, A. M., & Mooney, K. C. (1980). Family self-control instruction for children's nighttime fear reduction. *Journal of Consulting and Clinical Psychology*, *48*, 206–213.
- Graziano, A. M., & Mooney, K. C. (1982). Behavioral treatment of "nightfears" in children: Maintenance of improvement at 2½ to 3-year follow-up. *Journal of Consulting Clinical Psychology*, *50*, 598–599.
- Gullone, E. (2000). The development of normal fear: A century of research. *Clinical Psychology Review*, *20*, 429–451.
- Gullone, E., Cummins, R. A., & King, N. J. (1996). Self-reported fears: A comparison study of youth with and without an intellectual disability. *Journal of Intellectual Disability Research*, *40*, 227–240.
- Gullone, E., & King, N. J. (1992). Psychometric evaluation of a revised fear survey schedule for children and adolescents. *Journal of Child Psychology and Psychiatry*, *33*, 987–998.
- Gullone, E., & King, N. J. (1993). The fears of youth in the 1990's: Contemporary normative data. *Journal of Genetic Psychology*, *154*, 137–153.
- Gullone, E., & King, N. J. (1997). Three year follow-up of normal fear in children and adolescents aged 7–18 years. *British Journal of Developmental Psychology*, *15*, 97–111.
- Gullone, E., & Lane, B. (2002). The fear survey schedule for children II: A validity examination across response format and instruction type. *Clinical Psychology and Psychotherapy*, *9*, 55–67.
- Keppel, G. (1982). *Design and analysis: A researcher's handbook*. New Jersey: Prentice-Hall.
- King, N. J., Cranstoun, F., & Josephs, A. (1989). Emotive imagery and children's nighttime fears: A multiple baseline design evaluation. *Journal of Behavior Therapy and Experimental Psychiatry*, *20*, 125–135.
- King, N. J., Ollier, K., Iacuone, R., Schuster, S., Bays, K., Gullone, E., et al. (1989). Fears of children and adolescents: A cross-sectional Australian study using the revised-fear survey schedule for children. *Journal of Child Psychology and Psychiatry*, *30*, 775–784.
- King, N. J., Hamilton, D. I., & Ollendick, T. H. (1988). *Children's phobias: A behavioural perspective*. Chichester, England: Wiley.
- King, N., Ollendick, T. H., & Tonge, B. J. (1997). Children's nighttime fears. *Clinical Psychology Review*, *17*, 431–443.
- Mooney, K. C. (1985). Children's nighttime fears: Ratings of content and coping behaviors. *Cognitive Therapy and Research*, *9*, 309–319.
- Mooney, K. C., Graziano, A. M., & Katz, J. N. (1984). A factor analytic investigation of children's nighttime fear and coping responses. *The Journal of Genetic Psychology*, *146*, 205–215.
- Mooney, K. C., & Sobocinski, M. (1995). The treatment of nighttime fears: A cognitive-developmental approach. In C. E. Schaefer (Ed.), *Clinical handbook of sleep disorders in children* (pp. 69–102). New Jersey: Aronsen.
- Muris, P., Meesters, C., Merckelbach, H., Verschuren, M., Gebelen, E., & Aleva, E. (2002). Fear of storms and hurricanes in Antillean and Belgian children. *Behaviour Research and Therapy*, *40*, 459–469.
- Muris, P., Merckelbach, H., & Collaris, R. (1997). Common childhood fears and their origins. *Behaviour Research and Therapy*, *35*, 929–937.
- Muris, P., Merckelbach, H., Gadet, B., & Moulart, V. (2000). Fears, worries, and scary dreams in 4- to 12-year-old children: Their content, developmental pattern, and origins. *Journal of Clinical Child Psychology*, *29*, 43–52.
- Muris, P., Merckelbach, H., Ollendick, T. H., King, N. J., & Bogie, N. (2001). Children's nighttime fears: Parent-child ratings of frequency, content, origins, coping behaviors and severity. *Behaviour Research and Therapy*, *39*, 13–28.
- Ollendick, T. H. (1983). Reliability and validity of the revised fear survey schedule for children (FSSC-R). *Behaviour Research and Therapy*, *21*, 685–692.
- Ollendick, T. H., & Hersen, M. (1984). *Child behavioral assessment: Principles and procedures*. New York: Pergamon Press.
- Ollendick, T. H., & King, M. J. (1994). Diagnosis, assessment, and treatment of internalizing problems in children: The role of longitudinal data. *Journal of Consulting and Clinical Psychology*, *62*, 918–927.

- Ollendick, T. H., King, N. J., & Frary, R. B. (1989). Fears in children and adolescents: Reliability and generalizability across gender, age, and nationality. *Behaviour Research and Therapy*, 27, 19–26.
- Ollendick, T. H., Yule, W., & Ollier, K. (1991). Fears in British children and their relationship to manifest anxiety and depression. *Journal of Child Psychology and Psychiatry*, 32, 321–331.
- Pine, D. S., Cohen, P., & Brook, J. (2001). Adolescent fears as predictors of depression. *Biological Psychiatry*, 50, 721–724.
- Schaller, M., Park, J. H., & Mueller, A. (2003). Fear of the dark: Interactive effects of beliefs about danger and ambient darkness on ethnic stereotypes. *Personality and Social Psychology Bulletin*, 29, 637–649.
- Seligman, M. E. P. (1971). Phobias and preparedness. *Behavior Therapy*, 2, 307–320.
- Siegel, S. (1956). *Nonparametric statistics for the behavioural sciences*. Tokyo, Japan: McGraw-Hill Kogakusha.
- Silverman, W. K., & Albano, A. M. (1996). *Anxiety disorders interview schedule for DSM-IV, child and parent versions*. San Antonio, TX: Psychological Corporation.
- Treffers, P. D. A., & Silverman, W. K. (2001). Anxiety and its disorders in children and adolescents before the twentieth century. In W. K. Silverman, & P. D. A. Treffers (Eds.), *Anxiety disorders in children and adolescents: Research, assessment and intervention* (pp. 1–22). Cambridge, UK: Cambridge University Press.
- Westenberg, P. M., Drewes, M. J., Goedhart, A. W., Siebelink, B. M., & Treffers, P. D. A. (2004). A developmental analysis of self-reported fears in late childhood through mid-adolescence: Social-evaluative fears on the rise? *Journal of Child Psychology and Psychiatry*, 45, 481–495.
- Westenberg, P. M., Siebelink, B. M., & Treffers, P. D. A. (2001). Psychosocial developmental theory in relation to anxiety and its disorder: Status and future directions. In W. K. Silverman, & P. D. Treffers (Eds.), *Anxiety disorders in children and adolescents: Research, assessment and intervention*, (pp. 313–334). Cambridge: Cambridge University Press.