J. Child Psychol. Psychiat. Vol. 33, No. 6, pp. 987-998, 1992
Printed in Great Britain.

0021-9630/92 $5.00 + 0.00
Pergamon Press Ltd

Psychometric Evaluation of a Revised Fear Survey Schedule for Children and Adolescents

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Abstract—This study describes the second revision of a fear survey schedule for children which was originally developed by Scherer and Nakamura in the 1960's. The revised instrument (FSSC-II) was psychometrically evaluated on a sample of 918 children and adolescents aged between 7 and 18 years, attending regular primary and secondary schools in urban, suburban and rural areas of Victoria. It was demonstrated to have high internal consistency. The convergent and divergent validity of the revised instrument was examined by correlating it with conceptually related as well as distinct scales, respectively. Such analyses demonstrated sound validity. A five-factor solution almost identical to that reported for the FSSC-R, is described as are age and gender differences. The most common fears on the revised instrument are also reported.

Keywords: Fear, anxiety, children, adolescents

Recent years have witnessed increased attention on the fears of children and adolescents (e.g. King, Ollier, Iacuone, Schuster, Bays, Gullone & Ollendick, 1989). While nearly every child experiences a degree of fear over the course of development from infancy to adulthood, such fear is usually mild, age-specific and transitory (King, Hamilton & Ollendick, 1988; Morris & Kratochwill, 1983).

The expression of fear, which is very individualistic, is influenced by many factors including past experience, situational stimuli, temperament and physical as well as cognitive development. The empirical investigation of children's fears via behavioural observation, therefore becomes very difficult (Campbell, 1986). Given such limitations, research investigating fear has largely used the self-report methodology. Self-report instruments have the further advantage of being easy to administer at low cost (Ollendick & Hersen, 1984).

A self-report instrument which has been widely used to examine fear in children is Scherer and Nakamura's (1968) Fear Survey Schedule for Children (FSSC). Based

Accepted manuscript received 15 *April* 1991

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on adult fear survey schedules (Geer, 1965; Wolpe & Lange, 1964), the instrument comprises 80 stimulus items for which children are required to rate their level of fear on a 5-point scale ranging from 1 = none to 5 = very much. In a revision of the Fear Survey Schedule for Children (FSSC-R), Ollendick (1983) introduced a 3-point scale (ranging from 1 = none to 3 = a lot) in order to enhance the use of the scale with children younger than 9 years of age.

The FSSC-R has been reported to have acceptable internal consistency, test–retest reliability and construct validity. It has been demonstrated that the schedule is positively related to the Trait Scale of the State–Trait Anxiety Inventory for Children (Spielberger, 1970). It has also been demonstrated that the FSSC-R is negatively related to the Piers–Harris Children's Self-concept Scale (Piers & Harris, 1969) and the Nowicki–Strickland Locus of Control Scale (Nowicki & Strickland, 1973). Ollendick, Matson and Helsel (1985a) demonstrated that the schedule is sensitive to both gender and age differences, with girls and younger children reporting more fears than boys and older children, respectively. In addition, Ollendick (1983) has reported a five-factor solution: Fear of Failure and Criticism, Fear of the Unknown, Fear of Minor Injury and Small Animals, Fear of Death and Danger, and Medical Fears.

King *et al.* (1989) have recently administered the FSSC-R to an Australian sample of children and adolescents. They reported the fears of Australian children and adolescents to be remarkably similar both quantitatively and qualitatively to those of children in the U.S.A. Further, they incorporated "Nuclear War" and in subsequent research incorporated "AIDS" (King & Gullone, 1990) into the FSSC-R and found these stimulus items to be among the most commonly endorsed fears.

Although the FSSC-R has been applied in both normative and clinical research (e.g. Last, Francis & Strauss, 1989) and has been demonstrated to have acceptable psychometric properties (Ollendick, 1938), its item content had remained unchanged since the original scale was developed in the 1960's (Scherer & Nakamura, 1968). In the light of recent findings (e.g. King & Gullone, 1990; King *et al.*, 1989), the content validity of the FSSC-R is in need of revision if normative studies examining fear in the child and adolescent population are to provide an accurate and comprehensive account.

The purpose of the present study was to undertake a second revision of the Fear Survey Schedule for Children, in order to address the aforementioned issues. This has been achieved by firstly including more recently occurring and socially significant phenomena which are likely foci of childhood fears (e.g. Nuclear War, AIDS). Secondly, as a consequence of our research findings (Gullone & King, 1990) that several FSSC-R items had low internal consistency, these items have been omitted. Finally, in order to enhance the use of the instrument's validity with adolescents, a number of additional items relevant to this developmental period have been incorporated whilst keeping the wording at a reading level applicable to younger children. Hence, there is a broadening of the sample age range to whom the schedule can be validly administered (i.e. from 8–16 years for the FSSC-R to 7–18 years for the revised instrument) (Gullone & King, 1990). The present report describes reliability and validity of the revised instrument (FSSC-II). Age and gender patterns of fearfulness and common fears, as determined with the use of the revised instrument, are also described.

Method

Subjects

Three samples of participants were involved in the revision and evaluation of the FSSC-R. The first sample comprised 187 people composed from 24 secondary school teachers, 24 psychologists, 17 psychiatric nurses, 54 primary and 68 secondary school students. The teachers, psychologists and psychiatric nurses were recruited through a college of advanced education where they were enrolled in higher education courses. The primary and secondary school students were drawn from regular primary and seconday schools in suburban areas of Victorian.

The second sample, to whom the pilot FSSC-II was administered, comprised 376 children and adolescents (172 males and 204 females). Subjects ranged in age from 7 to 18 years: 107 were aged between 7 and 10 years (53 males and 54 females); 97 were aged between 11 and 14 years (46 males and 51 females) and 172 were aged between 15 and 18 years (73 males and 99 females). This sample consisted of students attending regular schools in urban and suburban areas of Victoria.

The third sample, to whom the final version of the FSSC-II was administered, comprised 918 children and adolescents (459 males and 459 females). Subjects ranged in age from 7 to 18 years: 340 were aged between 7 and 10 years (192 males and 148 females); 314 were aged between 11 and 14 years (146 males and 168 females) and 264 were aged between 15 and 18 years (121 males and 143 females). Again students were drawn from primary and secondary schools in urban, suburban and rural areas of Victoria. Socio-ecomonic as well as geographic factors were taken into account when selecting schools. Thus, the sample constitutes a representative cross-section of children and adolescents attending regular primary and secondary schools.

Procedure

The FSSC-R (Ollendick, 1983) was distributed to the first sample of respondents in their regular classrooms at college or school. The subjects were requested to generate items that they believed should be included in the fear schedule. They were informed of the reasons for revision and that the stimulus items should be relevant to children and adolescents. A total of 192 stimulus items were generated from which 31 were included in the revised schedule. Inclusion was based on the criterion that the stimulus item was endorsed by 5% or more of the respondents. Thirty-one items fulfilled this criterion.

A second method of generating items involved a literature review of research articles examining fear in children and adolescents. A total of 19 studies were reviewed (Äho & Erickson, 1985; Bamber, 1974; Bowd, 1983; Bowd, 1984; Croake, 1967; Derevensky, 1979; Hagman, 1932; King *et al.*, 1989; Lapouse & Monk, 1959; Maurer, 1965; Mooney, 1985; Ollendick, 1983; Ollendick *et al.*, 1989; Ollendick *et al.*, 1985a; Ollendick, Matson & Helsel, 1985b; Orton, 1982; Pintner & Lev, 1940; Scherer & Nakamura, 1968; Sidana, 1967). Those stimulus items reported as being among the ten most common fears in two or more studies were noted. A total of 58 stimulus items fulfilled the selection criterion of which 19 were not already included in the FSSC-R.

Upon inclusion of the 31 items generated by the respondents and 19 reported in the fear literature the scale comprised 130 stimulus items. The 130-item schedule was evaluated by five educational psychologists. The psychologists were asked to evaluate the content and the wording of the scale. On their recommendation and due to requests from several school principals (in schools to which the scale was to be administered) three stimulus items were deleted from the schedule. These were "Being forced to have sex" (rape), "Having sex", and "Sex with someone in your family" (incest). This resulted in a 127-stimulus item scale on which respondents were required to rate their level of fear for each of the stimulus items on a 3-point scale (i.e. 1 = Not scared, 2 = Scared, 3 = Very scared) (cf. Ryall & Dietiker, 1979). In order to facilitate administration to younger children in particular, the schedule was divided into two parts (i.e. part A: 64 items; part B: 63 items). This was achieved by random assignment of items to either part A or B thus enabling the schedule to be administered on two separate occasions.

Parts A and B were administered to the second sample (i.e. 376 children and adolescents). The two parts comprising the schedule were adminstered in counterbalanced order to children from different classes, in groups. The children and adolescents were directed to read each item and to place a tick

in the box in front of the words which most adequately described their level of fear. Any questions which arose were clarified by the researchers. For the children aged 7 and 8 years, the items and instructions were read aloud by the researcher whereas the older children and the adolescents completed the fear schedule independently. It was emphasized to the subjects that there were no right or wrong answers and that in responding to each item they should not be concerned with other students' responses.

Corrected item-total correlation coefficients were calculated for the overall sample and for each of the three age-groups separately. Those items with an item-total correlation of less than 0.40 for two or more age-groups were removed from the 127-item schedule. The above removal criteria resulted in a 75-item fear survey schedule of which 28 items formed part of the original scale, 19 were reworded versions of items forming part of the original scale and 28 items were new (see Table 3).

The 75-item fear survey schedule was administered to the third sample of respondents (n = 918). All subjects were administered the FSSC-II, on a group basis, by the first author and the class teacher. The directions given for completion of the schedule were identical to those described above.

The FSSC-II was administered on two occasions, one week apart, to 511 of the 918 subjects. The test–retest sample comprised 257 males and 254 females. One hundred and fifty-eight were aged 7–10 years, 185 were aged 11–14 years and 168 were aged 15–18 years.

In order to examine convergent (correlation with the Trait scale) and divergent (correlation with the State scale) validity, 432 students (207 males and 225 females) (155 aged 7–10 years; 132 aged 11–14 years and 145 aged 15–18 years) were administered the State–Trait Anxiety Inventory for Children (STAIC) (Spielberger, 1970). As a second indicator of convergent validity, 368 students (179 males and 189 females) (104 aged 7–10 years; 124 aged 11–14 years and 140 aged 15–18 years) were administered the Revised Children's Manifest Anxiety Scale (RCMAS) (Reynolds & Richmond, 1985) in addition to the FSSC-II. A second measure of divergent validity was obtained by comparing scores on the FSSC-II with scores obtained via administration of the Goodenough–Harris Drawing Test of Intellectual Maturity (GH) (Goodenough & Harris, 1963) (cf. Reynolds & Richmond, 1985). The GH was administered, in addition to the FSSC-II, to a total of 236 students (125 males and 111 females). One hundred and two students were aged between 7 and 10 years, 119 were aged 11–14 and 15 were aged 15 years. The GH is not applicable for adolescents aged above 15 years, hence it was not administered to students beyond this age. It was anticipated that overall fear estimates would be positively related to trait anxiety and manifest anxiety but not at all related to state anxiety nor intellectual maturity.

The data were analysed using the Third Edition of the Statistical Package for the Social Sciences (SPSS-X, 1988).

Results and Discussion

Reliability

Internal consistency and test–retest reliability over one week were examined. The internal consistency of the scale was found to be 0.95 for males and females, separately, 0.96 for each age group separately and 0.96 for the combined sample of respondents. One-week test–retest reliability for Total Fear score was 0.87 for males, 0.85 for females, 0.87 for 7–10 year olds, 0.86 for 11–14 year olds, 0.94 for 15–18 year olds and 0.90 for the entire sample. The means and standard deviations for Total Fear score and retest Total Fear score are presented in Table 1. The results demonstrate that the FSSC-II possesses high internal consistency, however, the means for each gender and age group as well as for the overall sample, reveal a significant decrease in Total Fear score at one-week retest. The decrease in the self-reported level of fearfulness although in need of investigation, may be due to an actual decrease in fearfulness occurring during the process of completing the schedule. It may be that completing the scale allows respondents to express their fears which, in turn, results in a decrease of fear. Irrespective of the reasons for the decrease, the retest Total

Fear scores retain the magnitude of age and gender differences characteristic of the first administration. Hence, the FSSC-II's power to discriminate between age and gender groups does not appear to be affected at retest.

The present results compare favourably to the reliability estimates reported for other fear survey schedules. For example, Ryall and Dietiker (1979) reported a one-week test–retest correlation coefficient of 0.85 for their Children's Fear Survey Schedule. Of most relevance to the present study, Ollendick (1983) reported a one-week test–retest reliability correlation of 0.82 for the FSSC-R. Both Scherer and Nakamura (1968) and Ollendick (1983) reported an internal consistency estimate of 0.94.

Table 1. Total Fear score and retest Total Fear score means and standard deviations by age and gender

Sample	Total Fear score		Retest Total Fear score	
	M	S.D.	*M*	S.D.
Males	121.36	21.84	110.50	23.12
Females	142.72	23.66	134.52	24.57
7–10-year-olds	139.10	24.54	129.78	26.04
11–14-year-olds	131.16	24.23	120.81	26.10
15–18-year-olds	124.74	24.75	117.48	26.63
Overall sample	132.14	25.15	122.46	26.69

Notes: Repeated measures *t*-tests comparing Total Fear score and retest Total Fear score for each age and gender group yielded significant mean differences ($p < 0.001$).
The Scheffe test for multiple comparisons yielded significant mean differences between each pair of age groups on Total Fear score ($p < 0.05$).

Validity

Validity of the FSSC-II was assessed by correlating overall fear estimates (i.e. Total Fear score) with psychometrically related indices (i.e. the RCMAS and the Trait Scale of the STAIC) and distinct (i.e. the GH and the State Scale of the STAIC) indices. In order to examine the construct validity of the FSSC-II, the item scores were factor analysed using the Principal Components procedure.

Correlations with other instruments. The relationships between the FSSC-II and State–Trait Anxiety, Manifest Anxiety and Intellectual Maturity scores are reported in Table 2. As anticipated, all correlations between the FSSC-II and the A-Trait Scale were moderate and significant. The same was found for the correlations between the FSSC-II and the RCMAS. Also as anticipated, with the exception of 7–10-year-olds, no significant correlations were found between the FSSC-II and the A-State Scale nor between the FSSC-II and the Goodenough–Harris Drawing Test. Contrary to expectations, significant, albeit very low, correlations were found between the latter two scales for the 7–10-year-olds.

In their validation of the Fear Survey Schedule for Children, Scherer and Nakamura (1968) reported a correlation of 0.49 ($n = 99$) with the Children's Manifest Anxiety Scale (Castaneda, Palermo & McCandless, 1956) which is very similar to that found between the FSSC-II and the RCMAS (see Table 2). Ollendick (1983), reported

Table 2. Correlations between the FSSC-II and the A-Trait Scale, A-State Scale, the RCMAS and the GH by age and gender

Sample	A-Trait	A-State	RCMAS	GH
Males	0.38***	0.09	0.47***	0.04
Females	0.31***	-0.03	0.31***	-0.11
7–10-year-olds	0.44***	0.18*	0.57***	0.19*
11–14-year-olds	0.35***	0.10	0.33***	-0.11
15–18-year-olds	0.46***	0.03	0.50***	NA
Overall sample	0.39***	0.07	0.42***	0.01

Note: NA = Not Applicable, * = $p < 0.05$, ** = $p < 0.01$, *** = $p < 0.001$.

correlation coefficients of 0.51 and 0.46 between the FSSC-R and the A-Trait scale as compared to the correlation of 0.39 found for the overall sample in the present study. In sum, the FSSC-II has been demonstrated to have sound divergent and convergent validity.

Factor analysis. Principal Components factor analysis with Varimax rotation, was carried out on the entire sample ($n = 828$). Ninety questionnaires were omitted from the factor analysis as a result of having missing responses on one or more of the 75 items. As noted by Tabachnick and Fidell (1989), a ratio of 5 cases to each observed variable is sufficient to yield reliable factor solutions. The Principal Components analysis was found to account for 72.5% of the total explained variance. Based on past findings (Ollendick, 1983) and conceptual considerations, a five-factor solution was retained for rotation.

The five-factor solution (presented in Table 3) found for the FSSC-II is conceptually very similar to that reported for the FSSC-R (Ollendick, 1983). While the majority of FSSC-II items clearly load onto one of the five subscales, there are several items for which the loading is relatively equal on two factors. For example, item 72 (Tigers) loads onto both Factor 1, "Fear of Death and Danger" and Factor 4, "Animal Fears". Item 77 (Cemeteries), while loading most heavily onto Factor 4, loads almost equally onto Factor 2 "Fear of the Unknown", and item 18 (Spiders) loads more heavily onto Factor 5 "Psychic Stress–Medical Fears", but almost equally onto Factor 4.

As with the factor structure for the FSSC-R, the present factor solution includes some clustered items which do not have an overtly logical relationship. For example, Factor 4 "Animal Fears" comprises mostly of "animal" stimulus items with the exception of three items (i.e. Thunderstorms, Thunder, Cemeteries). Also, Factor 5 "Psychic Stress–Medical Fears" comprises several items specifically relating to medical procedures or injuries (e.g. Going to the doctor, Someone in my family getting sick). It also comprises items which could perhaps be defined or perceived as stress arousing situations (e.g. Meeting someone for the first time, Having to talk in front of my class). As maintained by Ollendick (1983), it is possible that a psychological relationship is perceived among these items. For example, "Losing my friends" could be viewed as possibly occurring through serious injury or death.

In order to confirm the invariance of the factor structure across age and gender, separate analyses were conducted for males and females as for 7–12 year olds ($n = 434$) and 13–18-year-olds ($n = 395$). As with the overall sample, Principal Components factor analysis was followed by Varimax rotation and five factors were retained.

Although the results are tentative given sample size, the factor structure of the FSSC-II was found to remain relatively unchanged apart from several differences among factor loadings. For example, "Getting lost in a strange place" loaded most heavily onto the "Fear of Death and Danger" factor for 7–12-year-olds but onto the "Fear of the Unknown" factor for the 13–18-year-olds. "My parents arguing" and "My parents separating or getting divorced" also loaded onto the "Fear of Death and Danger" factor for the 7–12-year-olds but onto the "Fear of Failure and Criticism" factor for the 13–18-year-olds. Perhaps the most interesting difference among the factor structures was that between the "Fear of Failure or Criticism" factor when comparing age groups. While for the younger group, the stimulus items were clearly school-related, for the older group, the factor also included items such as "My parents criticizing me", "Getting punished by my dad" and "Losing my friends". Such findings are not surprising given the normative data on children's fear which demonstrate that while younger children display or report school-related fears, older children and adolescents are more concerned with social relations (e.g. Angelino, Dollins & Mech, 1956; Croake, 1969).

When comparing the factor structures between males and females, it was found that, for males, more items loaded onto the "Medical Fears–Psychic Stress" factor than for females including items such as "Meeting someone for the first time" and several school-related items which did not load onto the factor for females. For females, the factor was almost identical to that reported in Table 3. This was also the case with the "Animal Fears" factor which, for males included items such as "Dead People" and "Ghosts or Spooky Things". Overall, the factor structure, in particular items loading onto the "Fear of Death and Danger" factor were found to be relatively unaffected by age or gender.

Considering the substantial differences in schedule content between the FSSC-II and the FSSC-R, the factor structures are remarkably similar. Further, given the similarity in factor structures with those reported by others (e.g. Guarnaccia & Weiss, 1974; Miller, Barrett, Hampe & Noble, 1972; Scherer & Nakamura, 1968) and taking into account the size of the sample on which factor analysis was carried out, it can be confidently concluded that the factor structure is sound, hence supporting the construct validity of the revised scale.

Age and gender differences

A 3 (age group) X 2 (gender) ANOVA was carried out on the Total Fear scores. Significant age effects $[F(2,822) = 43.18,\ p < 0.001]$ and gender effects $[F(1,822) = 227.75,\ p < 0.001]$ were found. As indicated by the means in Table 1, females reported a higher overall level of fear than males. Also, an inverse relationship was found between overall fear and age. Thus, as has been consistently found in normative fear investigations, girls reported significantly more fears than boys on the FSSC-II as did younger children when compared to older children and adolescents (e.g. King *et al.*, 1989; Ollendick *et al.*, 1985a). This further supports the validity of the FSSC-II, demonstrating, as would be expected, that it is sensitive to respondents' age and gender.

The most common fears, that is, those stimulus items with the highest means, were

Table 3. Rotated factor loadings for the 75 items of the fear survey schedule (n = 828)

	Item	Factor I	II	III	IV	V
	Factor 1 "Fear of Death and Danger"					
N 20	Being kidnapped	*0.74*	0.20	0.10	0.05	0.04
53	Earthquakes	*0.72*	0.15	0.09	0.23	−0.01
N 33	Being threatened with a gun	*0.70*	0.14	0.06	0.08	0.08
N 28	Cyclones	*0.69*	0.18	0.12	0.21	−0.02
30	Being hit by a car or truck	*0.69*	0.10	0.12	0.10	0.07
N 17	Murderers	*0.64*	0.30	0.00	0.14	0.16
R 21	Getting a serious illness	*0.64*	0.04	0.13	0.04	0.18
35	Not being able to breathe	*0.62*	0.05	0.12	0.05	0.11
N 29	Myself dying	*0.61*	0.06	0.10	0.12	−0.02
R 10	Our country being invaded	*0.59*	0.24	0.06	0.01	−0.00
N 12	Nuclear war	*0.57*	0.20	0.06	0.04	0.02
R 23	Fire	*0.57*	0.27	0.10	0.23	0.17
N 34	Bushfires	*0.56*	0.30	0.10	0.15	0.13
N 13	Taking dangerous drugs	*0.56*	0.16	0.15	0.01	0.03
N 42	Someone in my family having an accident	*0.56*	0.11	0.17	0.04	0.20
74	Falling from high places	*0.56*	0.23	0.02	0.18	0.14
N 61	AIDS	*0.55*	−0.03	0.06	0.05	0.06
N 25	Someone in my family dying	*0.54*	0.09	0.14	0.00	0.18
N 75	Sharks	*0.52*	0.10	0.01	0.39	0.07
48	A burglar breaking into our house	*0.52*	0.36	0.17	0.15	0.15
R 41	Getting an electric shock	*0.52*	0.13	0.13	0.25	0.09
N 24	Having an operation	*0.50*	0.15	0.12	0.14	0.40
N 45	Someone in my family getting sick	*0.48*	0.10	0.25	0.09	0.26
N 63	Tigers	*0.47*	0.23	0.14	0.43	−0.10
	Factor 2 "Fear of the Unknown"					
N 50	Being alone at home	0.17	*0.67*	0.00	0.14	0.07
N 15	Violence on television	0.11	*0.62*	0.01	0.09	0.07
R 43	Getting lost in a crowd	0.27	*0.56*	0.15	0.20	−0.07
R 11	Darkness	0.05	*0.55*	0.04	0.08	0.18
65	Getting lost in a strange place	0.44	*0.54*	0.20	0.24	0.04
N 72	Strangers	0.42	*0.53*	0.09	0.16	−0.07
N 62	Creepy houses	0.27	*0.53*	0.12	0.34	0.14
3	Being alone	0.16	*0.53*	0.10	0.05	0.18
R 49	Having bad dreams	0.22	*0.51*	0.19	0.18	0.20
N 57	Being bullied	0.23	*0.47*	0.38	0.06	0.14
N 38	Drunk people	0.38	*0.45*	0.22	0.22	−0.11
32	Ghosts or spooky things	0.09	*0.42*	0.14	0.34	0.18
46	Strange looking people	0.31	*0.42*	0.20	0.27	0.01
R 7	Being in closed places	0.22	*0.42*	0.18	0.13	0.05
19	Being in a fight	0.26	*0.39*	0.30	0.13	0.26
69	The sight of blood	0.18	*0.38*	0.10	0.30	0.02
1	Being teased	0.00	*0.38*	0.33	−0.09	0.33
R 64	Dead people	0.34	*0.36*	0.10	0.31	0.25
R 2	Rides like the Big Dipper	0.20	*0.28*	0.09	0.19	0.19
71	Flying in a plane	0.11	*0.27*	0.01	0.21	0.18

Table 3—*continued*

Item		Factor I	II	III	IV	V
	Factor 3 "Fear of Failure and Criticism"					
37	Failing a test	0.20	0.03	*0.70*	0.14	0.09
R 9	Getting bad marks at school	0.12	−0.13	*0.64*	0.12	0.22
R 36	Getting punished by my dad	0.13	0.28	*0.53*	0.17	−0.10
18	My parents criticizing me	0.17	0.29	*0.52*	−0.07	0.12
R 58	Getting my school report	0.06	−0.02	*0.51*	0.22	0.27
26	Making mistakes	0.01	0.04	*0.50*	0.19	0.29
R 56	Sitting for a test	0.11	0.01	*0.49*	0.18	0.35
4	Being criticized by others	0.04	0.38	*0.48*	−0.05	0.23
47	Getting punished by my mum	0.12	0.29	*0.47*	0.08	−0.07
R 27	My parents arguing	0.32	0.22	*0.47*	0.07	−0.02
N 40	My parents separating or getting divorced	0.41	0.12	*0.44*	0.05	−0.09
31	Being sent to the principal	0.34	0.31	*0.40*	0.26	−0.04
70	Looking foolish	0.12	0.20	*0.35*	0.09	0.26
	Factor 4 "Animal Fears"					
60	Lizards	0.06	0.12	0.09	*0.54*	0.17
66	Thunderstorms	0.10	0.37	0.17	*0.51*	−0.03
R 55	Bees	0.22	0.15	0.13	*0.51*	0.12
N 59	Thunder	0.02	0.34	0.12	*0.51*	−0.01
N 68	Dingoes	0.35	0.23	0.14	*0.51*	−0.06
R 51	Rats	0.21	0.18	0.10	*0.50*	0.29
39	Snakes	0.39	0.19	−0.01	*0.50*	0.24
R 5	Mice	0.05	−0.01	.0.13	*0.46*	0.32
67	Cemeteries	0.17	0.33	0.09	*0.39*	0.16
	Factor 5 "Psychic Stress–Medical Fears"					
N 14	Having to talk in front of my class	−0.06	−0.06	0.20	0.17	*0.56*
8	Going to the doctor	0.11	0.05	0.04	0.09	*0.51*
N 52	Going to a new school	0.19	0.14	0.24	0.17	*0.45*
N 6	Losing my friends	0.16	0.17	0.35	−0.18	*0.43*
R 54	Getting an injection from a nurse or doctor	0.18	0.31	0.07	0.22	*0.42*
73	Having to go to hospital	0.31	0.28	0.01	0.15	*0.41*
N 44	Having no friends	0.21	0.19	0.35	−0.15	*0.39*
22	Meeting someone for the first time	0.03	0.12	0.27	0.28	*0.38*
116	Spiders	0.16	0.20	−0.10	0.37	*0.38*

Note: Italics indicate highest factor loading.
N = New item.
R = Reworded item.

found to differ only slightly in rank order depending on age and gender. Those stimulus items among the ten most common, when examining age and gender groups separately, were:* AIDS (2.67), Someone in my family dying (2.56), Not being able to breathe

*Overall sample mean for each common fear is given in parentheses.

(2.56), Being threatened with a gun (2.54), Taking dangerous drugs (2.46), Being kidnapped (2.46), Myself dying (2.44), Nuclear war (2.39), Murderers (2.38) and Sharks (2.34).

Each of the above-specified common fears was found to load onto the "Fear of Death and Danger" factor (see Table 3). This is not surprising given that stimuli most likely to be feared are those with innate or prepotent qualities important for survival (Marks, 1987).

Conclusions

The results of the present study demonstrate that the FSSC-II is a valid and reliable instrument for the assessment of children's and adolescents' fears. The FSSC-II was revised in an Australian context and was administered to a representative sample of Australian children and adolescents. This would appear to pose certain limitations on the generalizability of its use within other cultures. However, in the light of previous findings (Ollendick, King & Frary, 1989) which have demonstrated the factorial invariance of the FSSC-R across cultural groups, as well as the remarkable similarity between Australian and American children on the number and intensity of reported fears, it is maintained that the FSSC-II is likely to have valid and reliable applicability across, at least, closely related cultures.

Given the broad age range to whom the schedule is applicable, it is a valuable instrument for researching fearfulness over the course of development from elementary school years (i.e. 7 years) through to early adulthood (i.e. 18 years). The robust psychometric properties of the FSSC-II allow it to be confidently used as an ipsative instrument for identifying excessively fearful children for treatment. Further, it can be validly applied within a multi-modal assessment framework as a pre- and post-intervention evaluation measure (King, Gullone & Tonge, 1991). Most importantly, the FSSC-II, in addition to being psychometrically sound and sensitive to age and gender differences, provides an updated schedule of stimulus items relevant to the present social and environmental conditions.

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