

Fears of Children and Adolescents: A Cross-Sectional Australian Study Using the Revised-Fear Survey Schedule for Children

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Abstract—The Revised-Fear Survey Schedule for Children was administered to over 3000 Australian youths, aged 8–16 yrs. Consistent with previous findings, there was a significant age-related decline in fears. Females reported significantly more fears than males. The most common fears were similar to those reported by children and adolescents in the U.S.A. Nuclear war was added to the stimulus items and found to be the most commonly endorsed fear. Thus the self-reports of fear showed a concern for physical danger and harm.

Keywords: Fears, normative, children, adolescents, nuclear war

Introduction

Normative data on the fears of children and adolescents contribute to our understanding of emotional development and also have practical applications as evinced by their usefulness in clinical decision making (King, Hamilton & Ollendick, 1988; Morris & Kratochwill, 1983; Ollendick & Hersen, 1984). Since the 1960s, rating scales have emerged as a methodology for use in normative investigations; representative of these instruments is the Fear Survey Schedule for Children (Scherer & Nakamura, 1968). Consisting of 80 stimulus items, a three-point rating scale was introduced in a recent revision to enhance its use with young children (FSSC-R; Ollendick, 1983).

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In a psychometric evaluation of the FSSC-R, Ollendick (1983) obtained high internal consistency on two samples of children (coefficient alphas of 0.94 and 0.92). Whereas test-retest reliability over 1 week was high, the scale was only moderately reliable over a 3-month interval. The validity of the scale was supported through a comparison of scores with related psychometric instruments, namely, the Trait Scale of the State-Trait Anxiety Inventory for Children (Spielberger, 1970), the Piers-Harris Children's Self-Concept Scale (Piers & Harris, 1969) and the Nowicki-Strickland Locus-of-Control Scale (Nowicki & Strickland, 1973). The FSSC-R also discriminated between school-phobic children and matched controls in terms of level of fear. Furthermore, Ollendick obtained a five factor solution which accounted for 77% of the variance: Factor 1, "Fear of failure and criticism"; Factor 2, "Fear of the unknown"; Factor 3, "Fear of injury and small animals"; Factor 4, "Fear of danger and death"; and Factor 5, "Medical fears". Ollendick, Matson and Helsel (1985) used the FSSC-R in a normative study on U.S. children and adolescents aged 7-18 yrs ($N = 126$). Although younger children tended to report more fears than older children and adolescents, clear age differences were not observed in the quantity and patterns of fears. On the other hand, girls reported significantly more fears than boys which is consistent with the findings of previous researchers (e.g. Lapouse & Monk, 1959; Scherer & Nakamura, 1968). The most common fears included, for example, being hit by a car or truck, not being able to breathe, and fire-getting burned. Nuclear war was not included as a stimulus item; however, it should be noted that many children express fear of nuclear war, and report being worried about the possible widespread destruction and death should a nuclear war occur (Chivian, Mack & Waletzky, 1983; Goodman, Mack, Beardslee & Snow, 1983; Solantaus, Rimpela & Taipale, 1983). Of course, it is sometimes difficult to differentiate between worries and fears as seen in reactions to nuclear war.

Although the development and evaluation of fear survey schedules is a significant methodological advance, it must be recognized that most of the research investigations on children's fears have been conducted in the U.S.A. This poses a serious limitation on the generalizability of such findings and calls for replication in other countries/cultures (Arrindell, Emmelkamp & Van der Ende, 1984). Using a modified FSSC-R, the present researchers carried out a cross-sectional study on the fears of children and adolescents in Australia. Nuclear war was added to the list of stimulus items thus providing an opportunity to evaluate the prevalence of this real or imaginary fear. Of particular interest was the relationship of self-reported fears to age, gender and urbanicity as well as the most common fears of children and adolescents. This is the first normative investigation on the fears of Australian children and adolescents. Over 3000 school children participated in the investigation, making it fairly unique in terms of sample size. Hence findings similar to those already reported would provide further support to the universality of childhood fears.

Method

Subjects

Initially, 3268 children and adolescents attending regular primary and secondary schools in Victoria completed the FSSC-R. One hundred and fifty questionnaires had to be discarded; some had been

completed incorrectly and others were outside the required age range. This provided a final sample of 3118 children and adolescents (1481 boys and 1637 girls). Subjects ranged in age from 8 to 16 yrs: 1032 were between 8 and 10 yrs (537 boys and 495 girls); 1274 were between 11 and 13 yrs (601 boys and 673 girls), and 812 were between 14 and 16 yrs (343 girls and 469 boys). The sample consisted of children and adolescents attending urban and rural schools (2669 and 449, respectively). Although handicapped children were represented in the sample, children in special developmental schools were excluded. The schools were selected from various socioeconomic areas in order to obtain a representative cross-section of children and adolescents attending regular schools.

Procedure

As previously noted, the FSSC-R (Ollendick, 1983) was selected because of its high reliability and moderate validity. The FSSC-R consists of 80 items, but pilot work showed that a number of these were unsuitable for use in Australia. Eight items were changed to suit language and other nuances. For example, item 21 "getting a shot from the nurse or doctor" was changed to "getting an injection from the nurse or doctor" and item 46 "having to put on a recital" was changed to "having to sing or put on a play". Inventories with the additional item "nuclear war" (item 81) were distributed to 2705 subjects of the total sample. In the interest of securing the cooperation of schools, more personally confronting items (e.g. sexual abuse) were not included. The FSSC-R was administered to children on a group-basis (usually class) by a research assistant and teacher. Children were instructed to read each fear item and place a "X" in the box in front of the words that best described their level of fear: "none", "some" or "a lot". Any questions on the stimulus items and possible responses were clarified by the research assistant or teacher; not unexpectedly, it was observed that younger children required more individual assistance. For a number of children the FSSC-R was administered orally, particularly children with handicaps and/or reading problems.

Results

Consistent with the normative research that has utilized the FSSC-R (Ollendick *et al.*, 1985), the data were examined in relation to Total Fear scores, frequency (described as "prevalence" by Ollendick *et al.*, 1985) and the most common fears. The Total Fear score for each child was obtained by adding the scores for all responses across the 80 items (none = 1, some = 2, a lot = 3). The Total Fear score is a global index of a respondent's level of fear. The frequency of each respondents' fears was derived from the number of fear-items endorsed as eliciting the greatest level ("a lot") of fear. For comparative purposes, the data on nuclear war were not included in the calculation of Total Fear scores and frequency of fears. However, all of the stimulus items were ranked according to the percentage of the sample that endorsed "a lot" of fear thus yielding the most common fears.

Total Fear score

In this study, the mean Total Fear score across age, gender and location was 136. A 3 (age: 8-10, 11-13 and 14-16 yrs) \times 2 (male; female) \times 2 (location: urban and rural) ANOVA was carried out on the Total Fear scores. The mean Total Fear scores ($\bar{X}_s = 140, 136$ and 131) for the three age groups of children (8-10, 11-13 and 14-16 yrs, respectively) were significantly different, $p < 0.001$. In relation to gender, the mean Total Fear scores ($\bar{X}_s = 126$ and 145) for boys and girls, respectively, were also significantly different, $p < 0.001$. However, the urban and rural children yielded mean Total Fear scores that were not significantly different. Thus, whereas age and gender

had a significant impact on the Total Fear scores, the location of the respondents did not.

These trends were affirmed in analyses on the factors and individual items. Thus significant main effects for gender and age were obtained for each of the five factor scores (see Table 1). Significant age \times location interactions were found on four of the five factors. These interactions were the result of urban respondents in the middle or oldest age group expressing greater levels of fear than rural youths. Individual item analyses revealed significant main effects for age and gender on nearly all items; however, location was found to produced significant differences on considerably fewer items.*

Table 1. Average Total Fear scores for each factor by gender, age and location

	Gender		Age (yrs)			Location		Significant interactions	
	Total	Males	Females	8-10	11-13	14-16	Urban		rural
Factor 1	31.7	30.2 ^b	33.1	31.6 ^b	32.0	31.4	^a 31.8	31.1	Age \times Location ^a
Factor 2	28.4	25.9 ^b	30.6	29.9 ^b	28.1	26.8	28.3	28.7	Age \times Location ^a
Factor 3	35.4	32.0 ^b	38.6	36.8 ^b	35.0	34.2	35.4	35.8	Age \times Location ^b
Factor 4	30.0	28.4 ^b	31.5	31.3 ^b	30.2	28.2	29.9	30.9	
Factor 5	10.4	9.70 ^b	11.1	10.5 ^a	10.3	10.4	10.4	10.3	Age \times Location ^a

Factors: Factor 1, "Fear of failure and criticism"; Factor 2, "Fear of the unknown"; Factor 3, "Fear of injury and small animals"; Factor 4, "Fear of danger and death"; Factor 5, "Medical fears".
^a $p < 0.05$. ^b $p < 0.01$.

Frequency

The mean number of fears across age, gender and location was 14. A 3 (age: 8-10, 11-13 and 14-16 yrs) \times 2 (male, female) \times 2 (location: urban and rural) ANOVA revealed significant main effects. The average number of fears ($\bar{X}_s = 17, 14$ and 12) for the three groups of children aged 8-10, 11-13 and 14-16 yrs, respectively, was significantly different, $p < 0.001$.

The relationship between age and number of fears is shown in Fig. 1. Unexpectedly, at ages 14 and 15 yrs, there was a slight increase in the average number of self-reported fears; otherwise a clear decrease in the average number of fears occurred with increasing age. Of special relevance to these findings, a number of items produced an age-related increase in self-reported fears (i.e. a trend opposite to that obtained for the average number of fears). Foremost of these items were having to talk to the class, having to sing or put on a play, taking a test, failing a test and poor grades. Interestingly, many of these fear items are subsumed by the fear of failure and criticism factor (Ollendick, 1983).

Turning to gender, the means for girls ($\bar{X} = 18$) and boys ($\bar{X} = 10$) were significantly different, $p < 0.001$. Interestingly, item 11 (snakes) produced the greatest

*Data on individual item analyses has been lodged with The British Library. Document Supply Centre as Supplementary Publication No. SUP 90198 (8 pages). Retention copies may be obtained by contacting the Customer Services, The British Library, DSC, Boston Spa, Wetherby, West Yorks, LS23 7BQ, U.K.

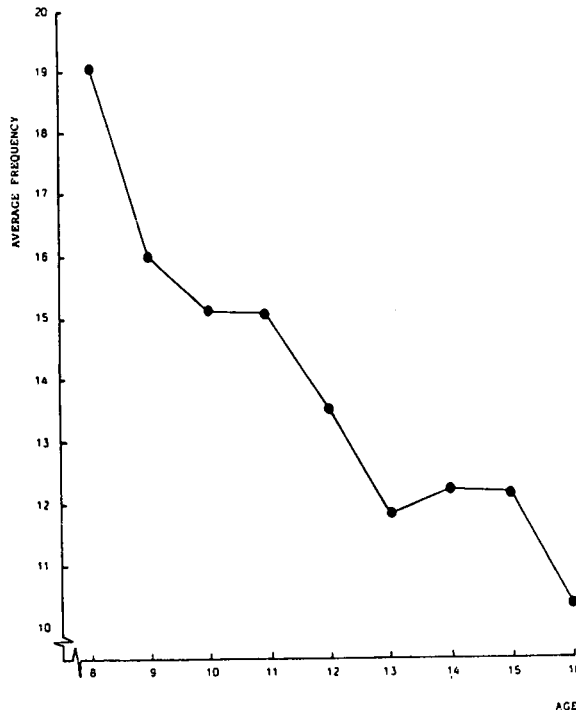


Fig. 1. Frequency of fears across age.

difference between boys and girls on percentage endorsements of intense fear (24 and 57%, respectively). Regarding location, the average number of fears reported by respondents attending urban schools ($\bar{X} = 14.14$) was slightly greater than the average number of self-reported fears of children attending rural schools ($\bar{X} = 14.08$). Although very small, these differences were statistically significant, $p < 0.05$. Two-way and three-way interactions were not significant.

Most common fears

Table 2 shows the most common self-reported fears. On Ollendick's (1983) factors the most frequent fears concerned "danger and death", with fear of nuclear war heading the list. The self-reported fears of boys and girls were very similar, but were nearly always more common among girls. Again consistent with the overall findings, most of the common fears at 8–10 yrs underwent a decline at 11–13 yrs, and a further decline at 14–16 yrs (see Table 3).

Discussion

Consistent with the research findings in other countries, it appears that Australian children and adolescents evince multiple fears and that gender and age are significant influences on self-reported fears. In particular, the findings are similar to those of Ollendick *et al.* (1985) who used the same instrument in their study on youth in the U.S.A. Australian children and adolescents reported an average of 14 fears compared

Table 2. Common fears of children and adolescents

Item No.	Item description	Overall					Gender				
		Factor	% Endorsement	Item No.	Item description	Factor	% Endorsement	Item No.	Item description	Factor	% Endorsement
81	Nuclear war	4	72	81	Nuclear war	4	68	81	Nuclear war	4	76
76	Not being able to breathe	4	63	41	Being hit by a car or truck	4	56	20	Bombing attacks—being invaded	4	71
41	Being hit by a car or truck	4	62	76	Not being able to breathe	4	55	76	Not being able to breathe	4	70
20	Bombing attacks—being invaded	4	60	20	Bombing attacks—being invaded	4	48	41	Being hit by a car or truck	4	68
72	Earthquakes	4	51	72	Earthquakes	4	42	26	A burglar breaking into house	3	62
34	Fire-getting burned	4	49	58	Falling from high places	4	41	34	Fire-getting burned	4	61
58	Falling from high places	4	49	34	Fire-getting burned	4	39	72	Earthquakes	4	59
26	A burglar breaking into our house	3	48	26	A burglar breaking into our house	3	34	11	Snakes	3	57
11	Snakes	3	41	59	Getting a shock from electricity	4	30	58	Falling from high places	4	57
9	Death or dead people	4	39	9	Death or dead people	4	29	9	Death or dead people	4	49

See Table 1 for explanation of the factors.
Nuclear war was added to the FSSC-R.

Table 3. Common fears across age

Item No.	8-10-yr-olds			Age groups 11-13-yr-olds			14-16-yr-olds				
	Item description	Factor	% Endorsement	Item No.	Item description	Factor	% Endorsement	Item No.	Item description	Factor	% Endorsement
81	Nuclear war	4	68	81	Nuclear war	4	80	81	Nuclear war	4	69
41	Being hit by a car	4	72	76	Not being able to breathe	4	62	76	Not being able to breathe	4	55
76	Not being able to breathe	4	68	41	Being hit by a car or truck	4	62	20	Bombing attacks —being invaded	4	53
20	Bombing attacks —being invaded	4	65	20	Bombing attacks —being invaded	4	62	41	Being hit by a car or truck	4	50
72	Earthquakes	4	62	72	Earthquakes	4	51	34	Fire-getting burned	4	48
58	Falling from high places	4	58	34	Fire-getting burned	4	51	58	Falling from high places	4	42
26	A burglar breaking into our house	3	56	26	A burglar breaking into our house	3	47	26	A burglar breaking into our house	3	39
34	Fire-getting burned	4	52	58	Falling from high places	4	46	11	Snakes	3	39
15	Being sent to the principal	4	47	11	Snakes	3	40	25	Spiders	3	36
10	Getting lost in a strange place	4	46	9	Death or dead people	4	39	72	Earthquakes	4	35

See Table 1 for explanation of the factors.
Nuclear war was added to the FSSC-R.

with 13 in the Ollendick *et al.* (1985) study. The mean Total Fear score of the Australian respondents is also very similar to that reported by Ollendick *et al.* (136 and 137, respectively).

The present researchers found that girls report far more fears than boys on all of the five factors identified by Ollendick (1983) and nearly all of the items on the FSSC-R. These gender differences confirm well established research findings (e.g. Bamber, 1974; Lapouse & Monk, 1959; Ollendick *et al.*, 1985). However, such findings have been challenged on the grounds that girls and boys are reporting in accord with sex role expectations rather than revealing genuine differences in fear responses (Graziano, DeGiovanni & Garcia, 1979).

The powerful effects of age on the self-reported fears of Australian children and adolescents were much stronger than in the Ollendick *et al.* (1985) study. However, the age-related decline in fears is consistent with the general body of research findings on the relationship between age and fears (e.g. Angelino & Shedd, 1953; MacFarlane, Allen & Honzik, 1954). Exposure to specific stimuli (e.g. taking a test, getting poor grades) for the first time in adolescence may account for the slight increases in fears that were observed at 14 and 15 yrs.

Although geographical location (urban vs rural) has been ignored as a demographic variable in normative fear studies, it was found to have a significant influence on the frequency of self-reported fears. Urban children reported a slightly greater number of fears than rural children. In addition, there were a number of significant age \times location interactions. However, these findings must be interpreted cautiously particularly in view of the large sample (Nunnally, 1960). Thus location was not as powerful as age and gender in determining self-reports of fear in children and adolescents.

As already pointed out, we added nuclear war to the original 80 stimulus items on the FSSC-R. The findings on this item have significant implications for our understanding of the common fears of children and adolescents. On the three-point scale, 72% of respondents reported the highest level (a lot) of fear. Clearly, the fear of nuclear war emerged as the most common fear. Leaving aside the fear of nuclear war, the common fears of children and adolescents are similar to those identified by Ollendick *et al.* (1985). Foremost of these is the fear of not being able to breathe. Presumably this particular fear is associated with distressing situations such as suffocation, drowning and diseases (e.g. asthma), all of which are life threatening. From a clinical viewpoint, this is an intriguing finding as breathing difficulties are frequently associated with anxiety (especially panic disorder). Similar to the findings of Ollendick *et al.* (1985) being hit by a car or truck, bombing attacks—being invaded, fire—getting burned, falling from high places and a burglar breaking into our house were also prevalent fears. Obviously the common fears of children and adolescents show concern for physical danger and harm.

To conclude, it appears that the fears of Australian children and adolescents are remarkably similar both quantitatively and qualitatively to those of children in the U.S.A. At the moment it appears that regardless of nation/culture, children evince multiple fears in which death and danger is the predominant factor. This is quite logical from a survival viewpoint and helps explain the consistent age and gender differences in self-reported fears. However, several authorities (Arrindell *et al.*, 1984;

Tasto, 1977) have questioned the extent to which factor structures can be generalized without empirical verification. Therefore, the next step is to assess the constancy of the factors (factorial invariance) in a direct comparison of U.S. and Australian samples (see Ollendick, King & Frary, 1989). Furthermore, it must be emphasized that the item content of the FSSC-R has remained unchanged since the original scale was developed in the 1960s (Scherer & Nakamura, 1968). In the light of the present findings (nuclear war) and other developments (e.g. AIDS) since the 1960s, the content validity of the fear survey schedule needs to be re-evaluated if normative studies are to provide an accurate and comprehensive account of the fears of children and adolescents.

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