



THE DEVELOPMENT OF NORMAL FEAR: A CENTURY OF RESEARCH

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ABSTRACT. *This paper reviews over a century's research into the developmental patterns of normal fear. Normal fear has been defined as a normal reaction to a real or imagined threat and is considered to be an integral and adaptive aspect of development with the primary function of promoting survival. Across a wide range of methodologies and assessment instruments researchers have been particularly focussed on investigating whether fear content, prevalence and intensity differ depending upon age, gender, socio-economic status, and culture. The structure and continuity of normal fears have also received much attention. The most consistently documented findings include that fear decreases in prevalence and intensity with age and that specific fears are transitory in nature. There are also predictable changes in the content of normal fear over the course of development. Such changes are characterized by a transition from infant fears which are related to immediate, concrete and prepotent stimuli, and which are largely non-cognitive, to fears of late childhood and adolescence which are related to anticipatory, abstract, and more global stimuli and events. Recent research into normal fear has more closely examined the validity of the more frequently used current assessment technique (i.e., the fear survey schedule). This research has provided some encouraging results as well as directions for future investigation. © 2000 Elsevier Science Ltd.*

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Just as courage imperils life, fear protects it.

Leonardo DaVinci (1700)

NORMAL FEAR, DEFINED as a normal reaction to a real or imagined threat, is considered to be an integral and adaptive aspect of development (King, Hamilton, & Ollendick, 1988; Morris & Kratochwill, 1983). Given its strong survival value, it is not surprising that, relative to other basic emotions (Izard, 1991), fear has been among the

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most extensively researched (Gullone, 1996). In fact, more than 100 investigations have been concerned with the fears or worries of youth, beginning in the late 1800s (Hall, 1897) and continuing at a rapidly increasing rate, particularly in the 1980s (e.g., Draper & James, 1985; King et al., 1989; Ollendick, 1983; Silverman & Nelles, 1988; Staley & O'Donnell, 1984).

Importantly, normal and adaptive fears have been differentiated from clinical fears or phobias on the basis of several criteria, including whether or not the expressed fear is age- or stage-specific, persists over an extended period of time, and/or significantly interferes with everyday functioning (Miller, Barrett, & Hampe, 1974). This distinction is of particular relevance for the present discussion, given that a central focus of the extensive research into normal fear has been to determine its developmental patterns, intensity, and duration against which to identify pathological fear or phobia (Gullone, 1996).

More specifically, normative fear research has focused on the identification of normal fears as well as differences in the content of such fears that can be predicted on the basis of demographic or contextual factors including age, gender, geographical location, and socio-economic status (SES) (Graziano, DeGiovanni, & Garcia, 1979; Gullone, 1996; King, Hamilton, & Ollendick, 1988).

In recent years, there has been an increase in cross-cultural and cross-national investigations. Normative fear research has also substantially matured with regard to the assessment strategies and tools used for data collection although the past century has witnessed the use of a variety of fear assessment methods, including retrospective reports by adults of their childhood fears.

RETROSPECTIVE ACCOUNTS

More than a century ago, Hall (1897) administered a questionnaire to over 1,000 adults requiring that they provide detailed descriptions of their fears. In this very early study, Hall's findings, which included reports for fears occurring between the ages of less than 4 to 26 years, revealed an age-related decrease of fears relating to meteors, clouds, blood, end of the world, being kidnapped, fairies, loss of orientation, and shyness of strangers. An increase of fear with age was reported for thunder and lightning, reptiles, robbers, self-consciousness, and machinery. A peak of fearfulness in early adolescence (i.e., 11–15 years) with a subsequent decrease in late adolescence (i.e., 15–18 years) was found in relation to wind, darkness, water, domestic animals, insects, ghosts, death, and disease. Hall noted that while specific fears either increased or decreased with age, many infantile fears remained through to adulthood. Also, boys reported fewer fears than girls.

Using a methodology similar to Hall's, Jersild and Holmes (1935a) also found an age-related increase in fears relating to self-consciousness, including failure, ridicule, inadequacy, and social situations, such as meeting new people. They also reported an age-related decrease in fears relating to specifically named imaginary creatures and of certain animals.

Both of these early studies reported data collected retrospectively and can be criticised in this regard because this method is clearly problematic (Abrahamson, 1983; Bellack & Hersen, 1977). Despite this limitation, however, it is noteworthy that the major findings of these early studies have since been supported by the voluminous research which has followed.

OBSERVATIONAL INVESTIGATIONS

The investigations which have been carried out using an observational methodology are few in number (e.g., Jersild & Holmes, 1935a; Jones & Jones, 1928; Scarr & Salapatek, 1970; Valentine, 1930). In one of the first observational investigations, Jones and Jones (1928) examined the specific fear of a 6-foot long snake (i.e., a *Spilotes Corais*) in a sample of children aged 14 months to 10 years and in a sample of adults. Although for children below 2 years of age, no fear of the snake was expressed, by age 3 years there were definite signs of fear, and by adulthood the fear was pronounced.

Using a rather more comprehensive approach, Jersild and Holmes (1935a) conducted a laboratory-based observational study involving 105 children aged between 12 and 71 months and eight experimental situations. They also conducted a 6 to 8-month retest for 16 of the children. Fears of falling boards, strange persons, high boards, loud sounds, a large dog, being left alone, and a dark room were all found to decrease with age. Of the eight situations observed, the snake situation was the only one that continued to provoke fear in the 71 month-old children. Of the eight situations, exposure to a large dog was most fear-inducing and being left alone, the least. This early work also demonstrated that girls displayed more fear than boys in five of the eight situations.

The observational investigations which have been conducted are limited in several respects including sampling (e.g., Valentine, 1930, reported observations of his own children), and focus of fear-arousing stimuli (e.g., Jones & Jones, 1928, focussed only on one type of snake). Also, some researchers relied on parent's descriptions of their child's behaviour (e.g., Jersild & Holmes, 1935a). The many limitations of informal and non-objective observation have long been recognized (Hollandsworth, 1986). Unfortunately, the observational normative fear investigations that have been conducted are largely of this nature. Observations of the more rigorous kind have not been conducted.

Further problems with observational research have been noted by King et al. (1988) who argue that, although normative fear has been researched from infancy through adulthood, in the early months of development it is difficult to distinguish fearful behaviour from that expressed as a response to other affective states. Campbell (1986), goes further to argue that behavioural responses are a relatively poor index of fear, even when not accounting for age, and concludes that the empirical investigation of fearfulness using behavioural observation is difficult if not unreliable.

Despite these failings, several important early insights into fear patterns and fear-arousing stimuli were documented by these studies. In particular, a general decrease in fearfulness with development was observed. Also, of importance was the finding that girls displayed more fear than boys. An additional outcome which has since been consistently reinforced with findings from behavioural inhibition work (e.g., Kagan, 1989; Kagan, Kearsley, & Zelazo, 1978; Kagan & Snidman, 1991) is that reported by Scarr and Salapatek (1970) that individual patterns of fearfulness remained stable in infants over a 2-month period.

PARENT/TEACHER REPORTS

A somewhat more frequently used method of assessing children's fears has been obtaining third-party reports from parents (e.g., Jersild & Holmes, 1935b; Lapouse & Monk, 1959) and/or teachers (e.g., Cummings, 1944, 1946). Hagman (1932) was

among the first to implement this methodology. The mothers of 70 children aged between 2 and 6 years participated in the study. An average of 2.7 fears per child was reported, with the most common being fears of dogs, doctors, storms, deep water, darkness, and situations characterised by 'strangeness,' as well as situations in which the fear stimulus was visible, approached the child or was suddenly approached by the child.

It is noteworthy, however that several studies using this methodology have shown that mothers have tended to underestimate their children's fears, compared to the reports given by children themselves (e.g., Jones, 1988; Lapouse & Monk, 1959). This is particularly true with regard to number of fears. Agreement relating to fear content has generally been found to be better if the parent has increased opportunities in which to observe contact between the child and the stimulus object or situation (e.g., postmen, teachers) as compared to situations more difficult to observe, such as 'being kidnapped.' An additional factor determining agreement between child and third-party reports may be the age of the child since, as reported by Jersild and Holmes (1935b), younger children are more likely to exhibit their fears than older children. Thus, the tendency of mothers to underestimate their children's fears may well be due to older children's increased ability to mask or 'fake' their emotions (Harris, Donnelly, Guz, & Pitt-Watson, 1986). Clearly then, outcomes based upon third-party reports need to be interpreted with some caution, particularly with regard to older children.

CHILD INTERVIEWS

Several researchers have gathered data by interviewing children (e.g., Derevensky, 1974; Maurer, 1965; Sidana, 1967; Slee & Cross, 1989; Winker, 1949) or their parents (e.g., Hall, 1897; Hagman, 1932; Jersild & Holmes, 1935a). One of the earliest interview-based examinations of children's normative fear was conducted by Jersild, Markey, and Jersild (1933). The 398 subjects who were involved in the study were aged between 5 and 12 years and were individually interviewed. During these interviews, children were most likely to report being afraid of supernatural phenomena and/or death. Younger children were more likely to report animal fears than were older children and boys reported more fears relating to bodily injury, whereas girls reported more fears relating to strange sights and sounds, loneliness, and darkness. With regard to SES, poorer children reported more fear of the supernatural, scolding, and failure in school, whereas wealthier children reported more fear of illness, injury, and death.

On the whole, investigating an overall age range between 4 and 19 years, interview-based studies, have generally reported an average of between two (Maurer, 1965) and four to five fears per child (Eme & Schmidt, 1978; Maurer, 1965) with the exception of Slee and Cross (1989) who reported a much higher average of 9.3 fears per respondent. As with studies based on care-giver reports, the number of fears is a point of disagreement with a fairly wide reported range. This range is likely to be due to differences in unidentified study-specific factors than differences in the actual number of fears. Also, no clear age or gender differences have been reported with regard to the number or prevalence of self-reported fears. For example, studies investigating samples ranging in age between 6 and 12 years (Derevensky, 1974; Maurer, 1965; Sidana, 1967) reported no age differences, as was also the case for Eme and Schmidt (1978),

in their 12-month follow-up investigation of 9-year-olds. With regard to gender differences, those studies within which such differences were yielded reported more fears for girls than for boys (Eme & Schmidt, 1978; Sidana, 1967).

In contrast to the lack of agreement regarding the number of identified fears, reported age-related differences in fear content have been much clearer. A particularly consistent finding is that animal fears are common in young children (Derevensky, 1974; Jersild et al., 1933; Lentz, 1985a, 1985b; Maurer, 1965; Winker, 1949). Between the ages of 6 and 10 years, fears of imaginary creatures and darkness predominated (Bauer, 1976; Derevensky, 1974; Maurer, 1965), while in later years such fears were found to be replaced with fears relating to bodily injury (Bauer, 1976; Winker, 1949).

Also with regard to content differences, girls reported being more fearful of darkness, strange sights and sounds, loneliness, personal relationships, and being kidnapped, robbed, or killed. Boys reported being more fearful of bodily injury, not being good and getting into trouble, nightmares, imaginary creatures including monsters, gorillas, and dinosaurs (Jersild et al., 1933; Poznanski, 1973; Winker, 1949).

Consistent with previously reviewed investigations, Sidana (1967) found that lower SES children reported more fears than their higher SES peers. Although fear content differences were not indicated by Sidana, those reported by Jersild et al. (1933), that lower SES children were more likely to fear supernatural phenomena, failure in school, and being scolded, while wealthier children were more likely to fear illness, injury, and death, were consistent with those later found by Lapouse and Monk (1959) via parent-report.

The interview has been argued to be the most efficient means of learning about an individual's experiences (Nietzel & Bernstein, 1981; Nietzel, Bernstein, & Russell, 1988). However, the open-ended or semi-structured interview situation also has its limitations. With such a method, it is possible that the interviewer may interpret responses within their own, rather than the respondent's frame of reference, otherwise referred to as 'expectancy effects' (Abrahamson, 1983; Miller, Barrett, & Hampe, 1974). When using this technique, it is crucial that inter-rater reliability be determined. Unfortunately, none of the interview studies reviewed have provided data demonstrating the reliability of their reports. Even those interview studies using a structured questionnaire (e.g., Sidana, 1967; Slee & Cross, 1989; Winker, 1949) for which evaluation is a much more straight-forward exercise, have not provided any such data.

FEAR LIST INVESTIGATIONS

Yet another methodology which has been implemented in the assessment of children's fears is the fear list technique for which children are simply asked to list their fears (e.g., Angelino, Dollins, & Mech, 1956; Angelino & Shedd, 1953; Nalven, 1970; Pratt, 1945). Not surprisingly, this somewhat cognitively demanding technique has generally been implemented with older samples typically above 8 years of age.

Pratt's (1945) study is unusual among those using this methodology because the sample included children ranging in age from as young as 4 years to 16 years. Overall the total of 570 respondents listed an average of 7.5 fears, with girls and older children reporting more fears than boys and younger children. The content of the reported fears also differed with younger children (9 years and below) reporting more animal-related fears and older children (10 years and above) reporting more fears re-

lating to illness, disease, and school. Boys more frequently reported fears relating to school while girls more frequently reported fears relating to illness. Overall, the most commonly reported fears were animal-related and included, for example, bears, snakes, tigers, elephants, and horses. Differences between children attending rural as compared to urban schools were also found, with urban children more frequently reporting fears of supernatural phenomena, criminals, and death-related stimuli and rural children more frequently reporting being fearful of animals.

As with Pratt (1945), Angelino and Shedd (1953) found that animal-related fears were mostly reported by 10- to 12-year-olds, while school-related fears were mostly reported by 13-year-olds. In contrast, those aged 15 to 18 years were more likely to report fears relating to economic and political issues. In a similar investigation, Angelino et al. (1956) found that lower SES children listed more animal-, money-, and job-related fears than upper SES children, who listed more school-related fears. The SES fear content differences varied further, depending on whether the respondent was a boy or girl. Thus, while lower SES boys were more likely to list fears relating to violence, upper SES boys were more likely to list fears relating to car accidents, injury, and juvenile delinquents. Lower SES girls were more likely to list fears relating to strangers and violence, while upper SES girls tended to report fears relating to heights, trains, roller coaster rides, communist attacks, and pet's safety.

Consistent with studies using alternative methodologies, these studies have found animal-related fears to be more characteristic of younger children while school, illness, and disease-related fears have been reported to be more characteristic of adolescents (Angelino et al., 1956; Angelino & Shedd, 1953; Pratt, 1945). The gender differences in fear content reported in these investigations, that boys were more likely to list fears of school, ghosts, animals, and being alone whilst girls were more likely to list fears of illness (Pratt, 1945), are somewhat contradictory to those of other studies (e.g., Lapouse & Monk, 1959) in which girls were found to be more fearful of animals, for example. Finally, with regard to SES, specific animals rather than generic categories were more often listed by ghetto as opposed to middle-class children. For example, Nalven (1970) reported that ghetto children listed fears of rats and roaches while middle-class children listed fears of dangerous animals or poisonous insects. Also, stimuli characteristic of a more threatening or less safe environment (e.g., violence) were more characteristic of lower SES children.

On the whole, these investigations have provided further support for the general findings as reported by studies using alternative methodologies. This consistency specifically relates to developmental patterns in fear content. In contrast, the number of reported fears has been an issue with little clarity among the studies thus far reviewed. The studies based on respondent generated fear lists have contributed little in this regard. For example, while some studies found a decrease in number of fears with increasing age (e.g., Cummings, 1944, 1946; Jersild & Holmes, 1935a) others have found no such trend (e.g., Derevensky, 1974; Maurer, 1965). Interestingly, Pratt (1945) found that older children reported more fears than younger children. However, this finding is most likely a function of the assessment method used rather than being a valid indicator of the actual number of fears since older children are perhaps simply able to think of more stimuli to list than their younger counterparts. In this regard, it is noteworthy that the fear list studies have been criticised on the basis that it is not possible to determine the completeness of the fear lists which are generated nor is it possible to determine the intensity of the fears listed (Graziano et al., 1979). Moreover, given the cognitively demanding nature of this method, the cognitive and verbal

abilities of the child need to be taken into account (King et al., 1988; Ollendick & Hersen, 1984).

SELF-REPORT FEAR SURVEY SCHEDULE INVESTIGATIONS

The administration of fear survey schedules to groups of children has been the most commonly used method of assessing fear in youth. In fact, in recent years the fear survey schedule has become, with few exceptions, the exclusive assessment tool for fear assessment, so much so that developmental fear research has largely shifted its focus from examining fear itself to evaluating the validity of the fear survey schedule.

In addition to Scherer and Nakamura's (1968) Fear Survey Schedule for Children (FSS-FC) based upon the adult Fear Survey Schedule (FSS) developed by Wolpe and Lang (1964), approximately 20 different instruments have been used, such as Croake's (1967) 69-item fear schedule and Ryall and Dietiker's (1979) 48-item fear schedule. Other investigations have employed adult schedules, for example, Bamber (1974) administered the Wolpe and Lazarus (1966) Fear Survey Schedule to a sample of adolescents in Northern Ireland.

Fear survey schedules for children differ with regard to number of items, length of the response scales, and wording of scales (e.g., Often–Never, Not Scared–Very Scared). However, despite the choice of fear survey schedules available to researchers and clinicians, that most widely used and that for which the psychometric properties are most robust remains Scherer and Nakamura's FSS-FC albeit in its revised forms (Burnham & Gullone, 1997; Gullone & King, 1992; Ollendick, 1983).

That the administration of the fear survey schedule has become the technique of choice for fear assessment is not surprising given its many advantages. For example, the fear survey schedule is easy, convenient, and inexpensive to administer. The clinician can obtain a great amount of information in a relatively small amount of time (Jensen & Haynes, 1986; Morris & Kratochwill, 1983). It can be objectively scored, and, therefore, minimises the influence of possible assessor bias. It can also assess responses to a large variety of fear stimuli, and data are generally easy to quantify. The use of fear survey schedules has enabled the identification of the number of extreme fears, as well as the intensity and content of fears. Furthermore, data derived through the use of validated schedules are highly comparable across different subject groups. Of course, as with other data collection techniques, self-report instruments also have their disadvantages. A major concern, and one which has become the focus of recent work in the area, is the degree to which the data collected with fear survey schedules are an accurate reflection of fear. A range of factors may influence responses, including social desirability, demand characteristics of the assessment situation (Bellack & Hersen, 1977; Hersen & Barlow, 1976), and respondents' comprehension of the assessment parameters or requirements (Gullone & Lane, 1997).

The research to be reviewed below will focus on findings regarding children and adolescents' fears as derived through data collected via the administration of fear survey schedules. Given the cognitive requirements, research incorporating fear survey schedules has mostly focussed on the fears of children aged 6 years or above. This research is necessarily silent on the self-reported fears of pre-school children. Whereas the research utilising methodologies other than fear survey schedules has been informative with regard to the content of children's fears and the duration of such fears, it has been less precise with regard to fear frequency and fear intensity. Due to the rela-

tively more systematic nature of fear survey schedule research, more reliable data have been obtained with regard to the latter fear indices.

Scherer and Nakamura's (1968) modification of Wolpe and Lang's (1964) adult fear schedule for children resulted in an 80-item fear survey schedule with a 5-point response scale ranging from 1 = None to 5 = Very Much. They administered the FSS-FC to 99 children aged between 9 and 12 years and investigated age and gender in addition to fear prevalence (i.e., the total number of items endorsed with the highest level of fear) fear intensity (i.e., the sum of all item scores) and the most common fears. They found no age differences but did find gender differences with girls scoring higher on, both, prevalence and intensity than boys. Also, the most common fears were identified as being mainly school and death/danger-related (e.g., being sent to the principal, failing a test, fire-getting burned, not being able to breathe). Scherer and Nakamura also reported good reliability and validity (convergent and discriminant) for the schedule in addition to an eight-factor fear structure (I: Failure and Criticism, II: Major Fears, III: Minor Fears—Travel, IV: Medical, V: Death, VI: The Dark, VII: Home/School-related, VIII: Miscellaneous).

Ollendick (1983) revised Scherer and Nakamura's (1968) fear schedule in order to enhance its validity with younger children and children with intellectual disabilities. This involved substituting the 5-point rating scale with a 3-point scale on which respondents were required to rate their level of fear (i.e., 1 = None, 2 = Some, 3 = A lot) for each of the 80 items. The revised Fear Survey Schedule for Children (FSSC-R) was psychometrically evaluated on two samples of children aged between 8 and 11 years and shown to have adequate reliability and validity. A principal components analysis yielded a five-factor structure (I: Failure and Criticism, II: The Unknown, III: Injury and Small Animals, IV: Death and Danger, V: Medical Fears) conceptually very similar to that reported by Scherer and Nakamura (1968).

Consistent with Scherer and Nakamura's findings, no significant age differences were found, however, gender differences were found, with girls scoring significantly higher than boys, and averaging 13 excessive fears as compared to 9 for boys. Among the most common fears were; a burglar breaking into our house, being sent to the principal, bombing attacks-being invaded, being hit by a car or truck, falling from high places, earthquakes, and not being able to breathe.

The FSSC-R has subsequently been administered in several other investigations (e.g., Ollendick, King, & Frary, 1989; Ollendick, Matson, & Helsel, 1985; Silverman & Nelles, 1988; Spence & Kennedy, 1989). These studies have included British (Ollendick & Yule, 1990; Ollendick, Yule, & Ollier, 1991) and Australian samples (King et al., 1989). The latter study incorporated one of the largest samples (i.e., over 3,000 children and adolescents), if not the largest in any fear study published to date, and included examination of location (urban versus rural), age and gender differences.

Whereas no clear location differences were reported, in contrast to other investigations using the FSSC-R (e.g., Ollendick, 1983; Ollendick et al., 1985), older respondents reported a lower frequency and intensity of fear than younger respondents. Also, consistent with previous work, a significant gender difference was found with girls reporting a higher frequency and intensity of fear than boys. The most commonly endorsed fears were remarkably similar to those reported by Ollendick as were the overall indices of fear.

Recently, the FSSC-R has been revised a second time (FSSC-II; Gullone & King, 1992, 1993) for the main purpose of updating its content, which had remained unchanged since the original scale was developed in the 1960s (Scherer & Nakamura, 1968). A

need for an updated FSSC was based on claims that an instrument developed during the 1960s and 1970s has questionable content validity in the 1990s (Ramirez & Kratochwill, 1990). In fact, researchers have encouraged content changes in fear scales throughout the past decade (King et al., 1989; Ramirez & Kratochwill, 1990).

Gullone and King's revisions include the addition of contemporary fears (i.e., AIDS and nuclear war). Also, the 3-point response scale was changed so that items are endorsed on a scale ranging from 1 = Not scared to 3 = Very scared (cf. Ryall & Dittiker, 1979). Given that Ollendick's FSSC-R had only been psychometrically validated for youth ranging in age from 8 to 16 years, an additional aim was to create an instrument which would be valid for administration to younger children (i.e., 7 years) and older adolescents (i.e., 18 years). A final aim of Gullone and King's (1992) investigation was to improve the psychometric properties and measurement sensitivity of the FSSC-R. This was achieved by omitting items that had low internal consistency and by adding items specifically relevant to adolescents.

The resulting FSSC-II differs quite substantially from the FSSC-R. It comprises 75 items, 28 from the original scale, 19 re-worded versions of items from the original scale and 28 new items. Psychometric analyses yielded good validity and reliability (for details see Gullone & King, 1992). The FSSC-II has also been reported to have a five-factor fear structure representative of other similar instruments (e.g., Arrindell, Pickersgill, Merckelbach, Ardon, & Cornet, 1991; Ollendick, 1983).

Using the FSSC-II with a large Australian sample, Gullone and King (1993) reported that, consistent with past research, girls generally endorsed significantly higher levels of fearfulness than boys. Age differences were also found with younger children reporting a higher intensity and a greater number of fears than older children and adolescents. Qualitative differences in normative fear were found with younger children reporting more animal fears and older children reporting more fears relating to social evaluation or psychic stress. Of most significance was the finding that, although the specific content of children and adolescents' normative fears in the 1990s, as compared to the 1960s, now included fear of AIDS and of nuclear war, the fears found to be most prevalent continued to relate to death and danger.

In an American validation study of the FSSC-II (Burnham & Gullone, 1997) findings were very similar across Australian and U.S. youth. The FSSC-II factor structure with American youth was found to be almost identical to that reported for Australian youth. Eight of the 10 most common fears were the same across countries. Moreover, age and gender differences consistent with the Australian data were found with girls and younger respondents reporting higher levels of fear.

Despite the differences in fear schedules used, the many other studies which have collected normative fear data through their administration have yielded data largely consistent with those reported above. Specifically, girls have consistently reported more fears than boys (e.g., Bamber, 1974; Catlin, 1972; Croake, 1967; Croake & Knox, 1971, 1973; Sidana, 1967). This finding has been reported for both children and adolescents. Although age differences have not been reported with the consistency found for gender differences, when they have been found, older children or adolescents report lower levels of fear or fewer fears than younger children (e.g., Catlin, 1972; Davidson, White, Smith, & Poppen, 1989). Another finding which has consistently been found is that lower SES youth report more fears than upper SES youth (e.g., Bamber, 1974; Catlin, 1972; Croake, 1967; Sidana, 1967).

With regard to fear content, consistency among fear survey schedule investigations is high with the most commonly endorsed items representing fears relating to death

and/or danger (e.g., Burnham & Gullone, 1997; Davidson et al., 1989; Gullone & King, 1993; King et al., 1989; Scherer & Nakamura, 1968; Ollendick, 1983; Ollendick & Yule, 1990). Age and gender differences in fear content have been reported by relatively few fear survey investigations. Nevertheless, when reported, the findings have been highly consistent with those reported for studies using different methodologies. For example, Moracco and Camilleri (1983), using the fear schedule technique, found that girls were more fearful of bugs and snakes than boys. This is consistent with Bamber's (1974) finding that girls reported more animal fears, whereas adolescent boys reported more failure-related fears. Gullone and King (1993), also using a fear survey schedule, reported a discriminant function analysis, which indicated that the fears on which boys and girls differed the most included, for example, rats, spiders, snakes, creepy houses, and being alone. On all items, girls obtained significantly higher mean scores than boys.

With regard to age-related differences in fear content, Catlin (1972) reported that the fears of sixth-grade children were more likely to be related to politics, whereas the fears of third-grade children were mostly related to drugs and natural phenomena. Also examining age differences in fear content, Gullone and King (1993) reported the top 10 discriminating items for 7- to 10-year-olds compared with 15- to 18-year-olds as determined from a discriminant function analysis. From highest to lowest these were: 1. Strangers, 2. Being kidnapped, tied on third position were; Getting lost in a strange place, and Having to talk in front of my class, tied on fourth position were; Drunk people and Getting lost in a crowd, 5. Our country being invaded, 6. Earthquakes, 7. Being sent to the principal, 8. Cyclones, tied on ninth place were; Tigers, and Strange-looking people, and 10. Taking dangerous drugs. On all items, the younger children scored significantly higher than the older group with the exception of 'Having to talk in front of my class' for which the latter scored higher.

In sum, fear survey schedule investigations have contributed most strongly with regard to determining the most commonly endorsed fears which appear to differ little across age and gender and also with determining the factor structure of normal fear. These investigations have also clearly established that girls consistently report more fears and more intense fear than boys. With regard to age, the data have been less enlightening with few studies even examining fear content differences across age and with inconsistent findings regarding age differences in fear frequency and intensity.

GENERAL FINDINGS

As reviewed above, the research into normative fear in children and adolescents has varied with regard to methodology and has included retrospective, parent/teacher reports, self-reports (interviews, fear lists, fear survey schedules). Below, the research reported above according to methodology has been classified according to outcome (i.e., age, gender, and socio-economic status differences, fear structure and duration, and cross-cultural/national findings).

Age Differences in Fear Content

When piecing together the findings from the many and varied studies that have examined normal fear in youth, a picture can be painted of the developmental pattern of normal fear. Beginning from infancy, it has been shown that young children become

fearful of stimuli in their immediate environment such as loud noises or loss of support (e.g., Scarr & Salapatek, 1970). Toward the end of the first year of life there is an increase in fear of strange persons, strange objects and also of heights (e.g., Kagan, 1978; Scarr & Salapatek, 1970). At this time there is also the emergence of separation anxiety. In contrast to fears expressed in earlier months, fears which emerge at this time clearly require cognitive maturation, including the capacity to remember and to distinguish the novel from the familiar. A little later, around the pre-school years, children show fear of being alone and darkness. Animal fears are also prominent at this age (e.g., Jersild & Holmes, 1935a; Pratt, 1945).

Development into the school years coincides with the emergence of fears relating to supernatural phenomena, failure and criticism, and bodily injury (e.g., Angelino et al., 1956; Bauer, 1976; Gullone & King, 1993; Hall, 1897; King et al., 1989). Global fears, including economic and political concerns, appear to be more characteristic of older adolescents (Angelino & Shedd, 1953).

Thus, in infancy children generally become fearful of stimuli in their immediate environment, or stimuli of a concrete nature. With increasing age, the infant's fears change to include anticipatory events and stimuli of an imaginary or abstract nature (Campbell, 1986). Overall, an age-related decrease has been reported for fears relating to animals, supernatural phenomena and darkness (e.g., Derevensky, 1974; Draper & James, 1985; Gullone & King, 1993, 1997; Hall, 1897; Jersild & Holmes, 1935a; Sidana, 1975). Between the ages of 6 and 12 years, fears of evaluative or social situations, bodily injury, illness, and school become somewhat more prominent (e.g., Angelino et al., 1956; Bauer, 1976; Gullone & King, 1993, 1997; Hall, 1897; Jersild & Holmes, 1935a; King et al., 1989; Pratt, 1945).

Not surprisingly, a consistent finding, particularly for studies using fear survey schedules, is that the death and danger theme evident in the most commonly reported fears continues throughout development into adulthood (e.g., Burnham & Gullone, 1997; Gullone & King, 1992, 1993; King et al., 1989; Mizes & Crawford, 1986; Ollendick, 1983).

Age Differences in Frequency and Intensity

As noted above, when an age difference has been found in the frequency and/or intensity of fears, it has tended to be in the direction of a decrease with a corresponding increase in age (e.g., Burnham & Gullone, 1997; Gullone & King, 1992, 1997). However, it is noteworthy that several investigations have not found such a relationship (e.g., Derevensky, 1974; Maurer, 1965; Ollendick, 1983; Russell, 1967; Sidana, 1967). A few studies have reported a peak in the number of fears in early adolescence and a subsequent decline (e.g., Angelino et al., 1956; Angelino & Shedd, 1953; Hall, 1897).

The early observational studies have provided some indication of fear intensity. For example, Jersild and Holmes (1935a) reported that the level of children's fear tends to decrease with age. Similar results have been reported for research involving parent—or teacher—reports (e.g., Cummings, 1946; Jersild & Holmes, 1935b). However, it should be noted that a decrease in the level of fear exhibited is not necessarily an indication of a decrease in fear intensity. Research into developmental changes in emotional expression indicates that preschool children show a much greater capacity to regulate expression than infants. For example, they can delay expression and can be selective in choosing a receiver (Izard & Harris, 1995).

Clearer investigation of fear intensity has occurred in studies utilizing fear survey schedules, since respondents are typically required to rate their level of fear for each stimulus item on a Likert scale. In such research, where age differences have been found, younger children (i.e., 8–10 years) have reported higher levels of fear intensity than older children (i.e., 11–13 years) or adolescents (i.e., 14–16 years) (King et al., 1989). However, the lack of consistency across studies with regard to the fear schedules used and with regard to the calculation and/or definition of fear intensity makes comparison across studies somewhat problematic. For example, Bamber (1974) referred to the total number of all items rated with the highest 2 points on the 5-point scale as being indicative of high intensity, however, Scherer and Nakamura (1968) and others (e.g., King et al., 1989; Ollendick, 1983) have calculated the same index by adding together the scores for all items. In contrast, these latter studies derived a prevalence or frequency score by calculating a total of all items endorsed with the highest level of fear.

Gender Differences in Fear Content

Fear content differences relating to gender are less well-researched than those relating to age. Moreover, when they have been researched, little clarity has ensued. Some of the content differences that have been reported include that girls are more fearful of the dark, strange sights, sounds, objects or persons, being kidnapped, robbed or killed, snakes, dirt, and animals. In contrast, boys have been reported to be more fearful of several stimuli including; harm, bodily injury, school, failure, nightmares, and imaginary creatures (Bamber, 1974; Cummings, 1946; Jersild & Holmes, 1935a; Jersild et al., 1933; Lapouse & Monk, 1959; Poznanski, 1973; Pratt, 1945; Winker, 1949). Gullone and King's (1993) study of 918 youth aged between 7 and 18 years, using the FSSC-II, yielded the findings that girls scored higher than boys on all five fear factors (i.e., death and danger, the unknown, failure and criticism, animals, psychic-stress-medical). However, the items which most strongly discriminated between boys and girls included; rats, spiders, snakes, mice, creepy houses, being alone, and having bad dreams. Girls scored higher on each of these items.

It has been proposed that differences in fearfulness between boys and girls are influenced by gender-role stereotyping. Whereas Gullone and King's (1993) findings provide some support for this proposal, more direct support has been provided by an investigation carried out specifically to test this proposal (Pierce & Kirkpatrick, 1992). In order to determine whether boys prevaricate in self-reports of fear, the authors administered a 72-item fear schedule to undergraduate psychology students. One month later they administered a schedule comprising 25 items, of which 14 were taken from the first schedule. Before completing the second survey, the students were instructed that they would be shown a 7-minute video depicting scenes of fish, rats, mice, and a short rollercoaster ride. They were also informed that their heart rate would be monitored during this time and that heart rate is one of the measures often used in lie-detector tests. The instructions included; "This makes it important to rate the items on this fear questionnaire as accurately as possible, because we will compare your answers with changes in your heart rate" (p. 415).

A pulse sensor was subsequently placed on the index finger of the dominant hand of each of the subjects while they watched the video presentation. Comparison of first test and retest showed that, at retest, boys significantly increased their ratings of fears relating to mice, rats, rollercoasters, crawling insects, harmless spiders, and high

places on land. In contrast, girls' fear responses did not significantly differ between test-retest on any of the 14 items. According to the authors, these items, particularly the first three are fears which men would be more likely to lie about in order to preserve their macho image.

Gender Differences in Frequency and Intensity

Within the constraints of definitional problems related to intensity definitions, it can be concluded that girls report a greater fear intensity than boys (e.g., Bamber, 1974; Gullone & King, 1993, 1997; Ollendick, 1983; Ollendick et al., 1985; Scherer & Nakamura, 1968).

Furthermore, girls overwhelmingly report or express a greater number of fears than boys (e.g., Bamber, 1974; Burnham & Gullone, 1997; Gullone & King, 1993; King et al., 1989; Lapouse & Monk, 1959; Scherer & Nakamura, 1968) with few exceptions (e.g., Der-evensky, 1974; Miller, Barrett, Hampe, & Noble, 1971; Nalven, 1970). This is particularly the case for older children, whereas the findings are much less conclusive for pre-school and elementary school children (e.g., Draper & James, 1985; Jersild & Holmes, 1935a).

Socio-Economic Status Differences in Fear Content

With regard to SES differences in fear content, fears such as those of animals, strange people, being abandoned by parents, death, violence, switchblade knives, policemen, and whippings have been demonstrated to be more characteristic of lower SES children, while fears of heights, ill health, trains, roller coaster rides and pet's safety have been reported to be more characteristic of middle or upper SES children (e.g., Angelino et al., 1956; Bamber, 1974; Jersild & Holmes, 1935a; Jersild et al., 1933; Nalven, 1970; Orton, 1982; Simon & Ward, 1974). However, these results need to be interpreted with caution since there are some contradictory findings regarding fear content differences among different SES groups.

As noted by Graziano et al. (1979), the fears of lower SES children tend to suggest that they may perceive their immediate environments as far more hostile and dangerous places than is the case for their middle or upper SES peers. Such fears suggest an immediacy and reality basis for the reported fears of lower SES children. As with gender, SES differences indicate that there is a socially determined component to the content and level of fear.

Socio-Economic Status Differences in Frequency and Intensity

Research examining the relationship between SES and fear has documented that children and adolescents of lower SES report more fear than their middle or upper SES peers (e.g., Croake, 1969; Croake & Knox, 1973; Sidana, 1975). Whilst the greater number of fears may be an indication that lower SES youth perceive their environments to be less safe than do middle or upper SES youth, this finding may also be a reflection of the tendency for lower SES children to report specific fears as opposed to generic categories (Graziano et al., 1979; Nalven, 1970).

The Structure of Fear

The structure or major types of fears have been determined in a variety of ways, the most common of which has been a post-hoc conceptual classification of reported

fears. However, the more recent fear survey schedule investigations have applied statistical procedures such as principal components analysis (e.g., Burnham & Gullone, 1997; Gullone & King, 1992; Ollendick, 1983).

Conceptual classifications include those by Jersild et al. (1933) comprising, among other categories, bodily injury and physical danger, animals, and being alone. Another classification of fears is that generated by Angelino and Shedd (1953), which includes categories such as school, health, economic and political, social relations, personal appearance, personal conduct, safety, natural phenomena, animals, and supernatural phenomena. Yet another classification scheme is that originally reported by Croake (1967) which includes animals, future, supernatural phenomena, natural phenomena, personal appearance, personal relations, school, home, safety, and political fears. As is apparent from these conceptual classifications, predominant categories have included bodily injury, personal relations, animals, physical danger, school, economic and political situations, supernatural and natural phenomena. It is noteworthy that these categories do not differ greatly from those derived through statistical analyses.

Principal component solutions have been reported for samples of varying ages. For example, Russell (1967) reported separate solutions for adolescents, adults, and senior citizens. The reported factors included; disability and cold war, macabre (e.g., ghosts, spiders, darkness), social alienation (e.g., being wrong), religion-superstition, animals, and rational dangers. Scherer and Nakamura (1968) reported an eight-factor solution for their FSS-FC, namely; I: Failure and Criticism, II: Major Fears (e.g., bombing attacks—being invaded, earthquakes) III: Minor Fears—Travel (worms or snails, ghosts or spooky things), IV: Medical Fears, V: Death, VI: The Dark, VII: Home-School, and VIII: Miscellaneous (e.g., thunderstorms, nightmares, loud sirens). Ollendick (1983) reported a five-factor solution for the revised FSSC, including; I: Fear of Failure and Criticism, II: Fear of the Unknown, III: Fear of Injury and Small animals, IV: Fear of Death and Danger, and V: Medical Fears.

In a cross-national investigation, Ollendick, King, and Frary (1989) examined the factorial invariance across Australian and American samples and found a very similar factor structure for respondents from the two countries with the exception of the 'Medical Fears' factor. On this factor Australian responses included items normally loading onto the 'Failure and Criticism' factor. Also including Australian respondents, Gullone and King (1992) found a five-factor solution for the FSSC-II which was almost identical to that reported by Ollendick (1983). The five factors were, I: Fear of Death and Danger, II: Fear of the Unknown, III: Fear of Failure and Criticism, IV: Animal Fears, V: Psychic Stress-Medical Fears. It is noteworthy that, as with Ollendick et al.'s (1989) Australian sample, the medical items combined with social-evaluative items. More recently Burnham and Gullone (1997) replicated the FSSC-II factor structure with an American sample.

The most striking finding regarding the examination of fear structure is the overwhelming consistency. Underlying the more commonly appearing factors are dimensions relating to social rejection (i.e., failure and criticism), death and danger (tissue damage), animals, medical treatment, psychic stress, and fear of the unknown (agoraphobic fears). These dimensions of fear have received further support from a review carried out by Arrindell and colleagues. These authors reviewed over 30 factor analytic studies with adults, of which 25 were considered to be reliable. Over 90% of the 194 first-order factors identified were able to be assigned to one of four major a priori defined categories being; I: Interpersonal Events or Situations, II: Death, Injuries, III-

ness, Blood and Surgical Procedures, III: Animals, and IV: Agoraphobic Fears (Arrindell et al., 1991).

The Duration of Fear

Normative fears are proposed to be relatively short-lived. Support for this claim has been found in several studies. For example, Jersild and Holmes (1935a) found that the fears of 24- to 71-month-old children decreased over a 6 to 8-month period. Jersild and Holmes (1935b) found that 3- to 7-year-old children no longer exhibited 53% of their fears 13 to 35 months later. However, despite this disappearance of certain fears, more fears per child were reported at follow-up than in the original parent interview. Thus, the frequency of fears increased although the content differed. In her 6-month and 1-year follow-up study of 2- to 7-year-olds, Cummings (1946) reported that in almost every case younger children showed a greater decline in fearfulness than older children.

Draper and James' (1985) investigated the stability of fear in a sample of 1- to 5-year-old children, and reported an increase in number of fears over 2- 15-month follow-ups with a greater increase between 31 to 45 months than between 15 to 30 months. As with Jersild and Holmes' (1935b) findings, a decrease was reported by approximately 4 years or above.

For their sample of 8- and 9 year-olds, Spence and McCathie (1993) reported a significant decrease in fear over a 2-year period in relation to all fears except those relating to death, danger and injury which remained constant over time. Fear in response to only one fear survey schedule item (i.e., giving a spoken report) was found to increase over time.

Two studies (Eme & Schmidt, 1978; Silverman & Nelles, 1989) examined fear in subjects ranging in age from 8 to 11 years. Eme and Schmidt (1978) found that, 1 year later, 83% of the fourth-grade children's fears were still present. During the initial interview boys, on average, reported fewer fears than girls. This varied little at follow-up as did the content of fears which related to bodily injury. Likewise, Silverman and Nelles (1989) reported high stability over time. However, in contrast to Eme and Schmidt, the content of fear was found to differ. At initial testing the most common fears related to death and danger whereas at follow-up the most common fears related mostly to psychic stress or failure and criticism.

Dong, Xia, Lin, Yang, and Ollendick (1995) investigated the stability of fears in a sample of 492 Chinese children and adolescents aged between 7 and 17 years. Over the 1-year follow-up period, overall fear prevalence was found to decrease significantly. Analyses of the FSSC-R factors indicated that fear relating to four of the five factors decreased over time. The exception was the medical fears factor. However, stability over time for the 10 most common fears was reported. The authors concluded that although considerable stability in the content of fear was demonstrated, the overall fear level and the number of extreme fears were found to decrease significantly over time.

More recently, Gullone and King (1997) investigated the stability of fear over a 3-year period in a sample aged between 7 and 18 years. A general decrease in fearfulness between initial and follow-up assessment was found. This decrease was most marked for the 7- to 10-year-olds. At approximately 11 years of age, a degree of stability for all fears, with the exception of psychic stress related fears and medical fears, became apparent. In contrast, for these fears there was a general increase over time. As with the

studies reported above, the most common fears related to death and danger and were relatively stable over time.

Therefore, on the whole, longitudinal studies have reported that normative fears are relatively transitory. In general, there is a decrease in fear with a corresponding increase in age or maturation. This decrease appears to be most marked in younger years (Cummings, 1946; Draper & James, 1985; Gullone & King, 1997; Jersild & Holmes, 1935a, 1935b), and continues at a fairly marked rate through to approximately 11 years of age or the beginning of adolescence, at which time a degree of stability begins to become apparent, particularly for fears relating to death and danger (Gullone & King, 1997). This appears to be true for all types of fear with the exception of that characterised by psychic stress or related to medical situations for which an increase appears to result with maturation (Dong et al., 1995; Gullone & King, 1997; Silverman & Nelles, 1989).

Cross-National and Cross-Cultural Studies

Although the majority of normal fear investigations have been conducted in Northern America, increasingly more investigations have taken place in other countries including: Africa (Maduwesi, 1982), Australia (Gullone & King, 1992; King et al., 1989), the United Kingdom (Ollendick & Yule, 1990), India (Sidana, 1975), Israel (Klingman & Wiesner, 1982; 1983) Italy (Sanavio, 1989), and Northern Ireland (Bamber, 1974). It is important to note, however, that valid comparison of specific findings is somewhat limited given that the measures used have differed (Fonseca, Yule, & Erol, 1994).

Also, in interpreting the work carried out in several different countries, an important distinction should be drawn between cross-national investigations and cross-cultural investigations since the former are important for determining the generalizability of findings across different populations but not necessarily across different cultures. In contrast, cross-cultural investigations are important with regard to establishing whether the reported findings of normative fear research are universal, that is, whether they are consistent across culture, defined as “the man-made part of the human environment.” (Herskovitz, 1948).

The several cross-national investigations that have been reported have provided support for the robustness of the major findings reported in the normative fear literature (e.g., Bamber, 1974; Gullone & King, 1993; King et al., 1989). With regard to age, several studies have found that older children report significantly fewer fears than younger children. In addition to the number of fears, the content of fearfulness appears to be similar across different “Western” countries. This is particularly true with regard to the most commonly reported fears which have predominantly been found to adhere to a theme of death and danger (Davidson et al., 1989; Gullone & King, 1993; King et al., 1989; Ollendick, 1983; Scherer & Nakamura, 1968).

Consistency across studies is also apparent with regard to gender differences. This has been demonstrated for investigations conducted in Italy (Sanavio, 1989), the United Kingdom (Ollendick, Yule, & Ollier, 1991) and Australia (Gullone & King, 1993; King et al., 1989). In sum, apart from some specific differences (e.g., sharks—among the top 10 fears for Australian children), there appears to be strong cross-national consistency in the central parameters of normal fear including developmental patterns, gender differences, the most common fears, and the structure of fear.

In order for useful conclusions to be derived from cross-cultural research, it has been proposed that cultures need to be meaningfully classified. Hofstede’s (1980) much

cited work identifying important cultural dimensions is central in this regard. Through his large-scale surveys including 40 countries and approximately 117,000 individuals, Hofstede found four factors which meaningfully classified the many cultures surveyed. In particular, two of these factors; power distance (i.e., the amount of respect and deference between those in superior versus subordinate positions), and individualism-collectivism, (i.e., the definition of identity as either comprising personal choices and achievements or the group's character), were found to be the most useful in grouping cultures. Of importance, Hofstede found that several European and North American countries were high on individualism and low on power distance whereas several Latin American countries and Asian countries were low on individualism and high on power distance.

Recently, Ollendick et al. (1996) have noted a positive association between overcontrolled or internalising problems (i.e., fear, anxiety, depression) and cultural practices that favour self control, social inhibition, and compliance with social norms (i.e., high power distance and low individualism). As such, it follows that, if normal fear is significantly influenced by cultural or socialization variables, significant differences should be evident between countries such as North America, Australia, and the United Kingdom, and collectivist cultures within, for example, Africa or China.

As reported above, it has been demonstrated that studies based on samples within Western countries have found similar levels and patterns of fear. Based on cultural differences it has been proposed that children and adolescents in non-Western cultures should report more fears and higher levels of fear than their Western counterparts (e.g., Dong, Yang, & Ollendick, 1994; Ollendick et al., 1996).

Dong et al. (1994) investigated the fears of 825 Chinese children and adolescents aged between 7 and 17 years. Consistent with Western investigations, girls reported a higher overall fear level and more fears than boys. However, contrary to the researchers' prediction that fear would decrease with age, examination of differences across three age-groups (i.e., 7–10 years, 11–14 years, and 15–18 years) indicated that youth aged between 11 to 14 years reported higher fear levels than the youngest and oldest groups who did not differ from one another. In particular, the 11- to 14-year-olds reported more failure and criticism-related fears (i.e., social-evaluative fears). Also, when compared to Western samples, the researchers reported that the 7- to 10-year-old Chinese children reported less fear than the American and Australian children, the 11- to 14-year-olds reported more fears and the adolescents comprising the oldest age group did not differ. This 11- to 14-year-old difference was explained as perhaps being due to the cultural practice in China of placing a high value on the need to do well in school and specific educational practices which are most central for children at this age.

With regard to the most common fears, consistency with previous findings was found in that the Chinese students endorsed mostly death and danger-related items (e.g., not being able to breathe, earthquakes, being hit by a car or truck). Nevertheless, several of the most common fears were social-evaluative in nature (e.g., having my parents argue, failing a test, getting poor grades).

In a more extensive cross-cultural investigation, Ollendick et al. (1996) directly compared the fears of 1,200 American, Australian, Chinese, and Nigerian children and adolescents aged between 7 and 17 years. On the basis of cultural differences, the researchers hypothesised that the self-reported level of fear would be higher in the Nigerian sample compared to the Australian and American samples but not different to the Chinese sample. They also predicted that girls would report higher levels of fear than boys and that there would be an age-related decrease in fear. The latter prediction was qualified in the light of Dong et al.'s (1994) finding.

Interestingly, girls reported more fear than boys in three of the four samples, with no difference among Nigerian respondents. Age differences were also restricted to certain samples. Specifically, younger children reported more fear than older children and adolescents only in the American and Australian samples. The age differences for the Chinese sample were consistent with those reported by Dong et al. (1994) whereas no age differences were found for the Nigerian sample.

As expected, differences across the samples were found with the Nigerian and Chinese samples reporting more social-evaluative fear and safety-related fear than the Australian and American samples. The most common fears were primarily death and danger-related with some fears being specific to country (e.g., ghosts in China, looking foolish in America, the ocean in Nigeria, and guns in Australia).

Clearly, more work of a cross-cultural nature is required, particularly work that is based on emic assessment measures (measures developed within the culture) as opposed to the imposed-etic (measures developed in one culture and translated for use in a different culture) approach that has been used. Nevertheless, the work that has been conducted has given some important insights into the influence that culture or socialisation can have on fear experiences. In particular, it appears that whilst the most common fears are quite consistent across culture, culturally specific differences exist with regard to developmental pattern of fears such that youth in non-Western cultures have not been found to report the same age-related decrease in normal fear that has been found for their Western peers. Although Dong et al. (1994) proposed that these differences are likely to be related with specific educational practices in countries such as China, future research is required to confirm both the cross-cultural differences and their interpretation. In contrast, the gender difference appears to be quite robust, which suggests universality in either socialisation processes of boys and girls or in prepared fear experiences.

CONCLUSIONS AND FUTURE DIRECTIONS

In over one century of fear research, substantial progress has been made. The literature strongly documents a consistent and predictable pattern of fear development between birth through to adulthood. Furthermore, the research has indicated that the developmental trends, for the most part, are consistent across cultures. However, despite much progress there remain unanswered questions. One major issue relates to assessment. As already noted, normal fear is, in present times, overwhelmingly assessed or researched through the use of self-report fear survey schedules. This is not surprising given the many advantages of this method. Nevertheless, questions continue to be asked with regard to the specific cognitive parameters that fear survey schedules are actually tapping into.

Several investigations have been carried out with the specific intent of delving further into the meaning of responses on fear survey schedules. For example, McCathie and Spence (1991) argued that the death and danger-related events depicted in fear survey schedules and consistently reported as being among the most common fears actually have a low probability of occurring. Thus, the likelihood of children frequently being concerned about such events or engaging in related avoidance behaviour should also be low. To further investigate the basis of high fear ratings on death and danger-related items, McCathie and Spence (1991) administered standard and adapted versions of Ollendick's (1983) FSSC-R to a sample of Australian school stu-

dents, aged between 7 and 13 years. Their adapted version required that each item be endorsed for frequency of fear (i.e., Never, Sometimes, Every day) and for frequency of avoidance of stimulus or event. They found no significant differences between the standard and adapted versions of the FSSC-R. Rather they found age and gender differences consistent with past research regardless of instructions given. They also found that the 15 most common fears were very similar to those reported by Ollendick and King in their investigations (cf. King et al., 1989; Ollendick, 1983). This was true regardless of the instructions given.

In a subsequent investigation, Ollendick and King (1994) examined whether the high number of fears endorsed by adolescents on fear survey schedules are a valid indicator of daily distress associated with those fears. In order to examine daily distress, they asked a large sample of adolescents aged between 12 and 17 years to rate each item of the FSSC-R on a 3-point scale of fear (none, some, a lot) and also an additional 3-point scale of daily interference (none, some, a lot). They found strong positive agreement between the level of fear reported for each item and level of interference for the corresponding item. For the 10 most common fears concordance ranged between 38% for snakes and 71% for failing a test. On the basis of their findings, the authors concluded that self-reports of fear are associated with high levels of daily interference and distress.

Gullone and Lane (1997, 1999) extended upon research investigating the validity of fear survey schedule responses by administering the FSSC-II with three different sets of completion instructions (standard, on a daily basis, imagine yourself in the situation) each to three different adolescent samples. In addition, differences between fear frequency versus intensity ratings were examined. Approximately 400 adolescents aged 11 to 18 years participated in the study. Whilst no difference in self-reported fear was found across the different instruction types, a difference was found between reports of fear intensity versus frequency on the death and danger factor of the FSSC-II, with fear intensity reports being significantly higher than frequency reports. Also, 15- to 18-year-old female adolescents significantly discriminated between imagined and daily fear intensity, scoring higher on the former. Examination of the top 10 fears, which were death- and danger-related, indicated consistency despite different instructions.

Muris, Merckelbach, and Collaris (1997) further investigated children's most common fears by individually asking children "What do you fear most?" and subsequently administering the FSSC-R. In the free option method, the 129 children aged between 9 and 13 years primarily reported animal fears, followed by fears of death and danger, medical fears and fear of failure and criticism. Muris et al. also found that a considerable portion of the sample reported spiders as their most intense fear. In contrast, on the FSSC-R, the children scored highest on the death and danger factor.

In a similar investigation, Lane and Gullone (1999) asked a sample of 439 adolescents aged between 11 and 18 years to first list their three greatest fears and then to complete the FSSC-II (Gullone & King, 1992). On the whole, the most commonly listed fears, deviated from the death and danger theme, also including fears of failure, animal fears, and fears of the unknown. As with Muris et al. (1997), the item listed most frequently was 'spiders'. In contrast, the 10 most common fears generated via the fear schedule all related to death and danger. Lane and Gullone proposed that their findings can best be explained as being due to a tendency toward providing global responses (e.g., death) in self-generated fears, thus, encompassing the majority of specific death-related fears included in the fear schedule into fewer items and allowing for other

predominant fears to be listed among the three most common fears. As concluded by Muris et al., Lane and Gullone argued that it is perhaps with a combination of these methodologies that a truer picture of the most common fears can be ascertained.

In combination, these recent investigations have contributed to our knowledge regarding both the usefulness and limitations of fear survey schedule use. In particular, respondents are, to some extent, discriminating between the different sets of instructions they have been provided with. Nevertheless, as with any assessment tool, outcomes are restricted to the parameters of the tool. This was clearly shown by Muris et al.'s (1997) and Lane and Gullone's (1999) work. These latter studies suggest that a complete assessment requires a combination of methods and possibly multiple informants (Ollendick et al., 1996). Also, fear assessment has been strongly tied to, and perhaps restricted by, the "stimulus specific" notion of fear. That is, research has focussed exclusively upon the identifying stimuli that elicit fear. Our knowledge of fear experiences could be increased through assessment measures which measure the construct in broader terms (e.g., Gullone, King, & Ollendick, in press).

Aside from measurement issues, there is still only limited research on the correlates of fear experiences. Longitudinal research indicates that, although increased maturation relates to an overall decrease in fearfulness, individuals who score higher or lower than the norm continue to do so over time. That is, individual differences in normal fear levels are constant, suggesting a trait aspect to fearfulness (Gullone & King, 1997). It may be that individuals who experience high levels of trait fearfulness, in conjunction with other risk factors, are more vulnerable to developing disorders. Factors which have been suggested but not empirically researched include parenting practices, attachment styles, and family environment (Gullone, 1996). Future research into the relationship between normal fear experiences and other developmental experiences (e.g., parenting styles and family experiences) as well as other individual difference variables is required. Such research may prove invaluable in extending knowledge of aetiological factors for internalising disorders beyond learning model explanations.

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