Solutions to school refusal for parents and kids

Pinpoint and address reinforcers of the child's behavior.

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Case: 'He's okay on weekends'

Nathan, age 13, is referred by his parents for recent school refusal behavior. He has had difficulty adjusting to middle school and has been marked absent one-third of school days this academic year. These absences come in the form of tardiness, skipped classes, and full-day absences.
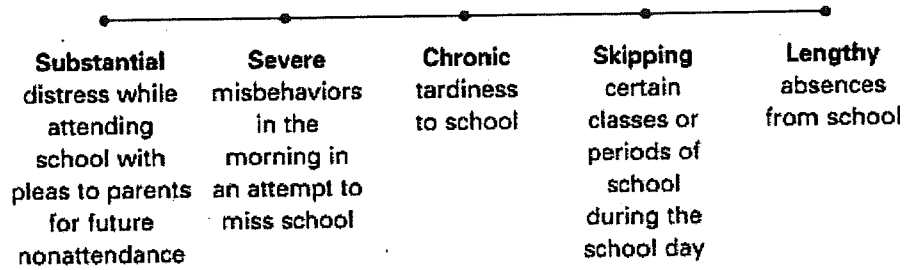
Nathan complains of headaches and stomachaches and says he feels upset and nervous while in school. His parents, however, complain that Nathan seems fine on weekends and holidays and seems to be embellishing symptoms to miss school. Nathan's parents are concerned that their son may have some physical or mental condition that is preventing his school attendance and that might be remediated with medication.

Child-motivated refusal to attend school or remain in class an entire day is not uncommon, affecting 5% to 28% of youths at some time in their lives.[1,2]

The behavior may be viewed along a spectrum of absenteeism (Figure), and a child may exhibit all forms of absenteeism at one time or another. In Nathan's case, for example, he could be anxious during school on Monday, arrive late to school on Tuesday, skip afternoon classes on Wednesday, and fail to attend school completely on Thursday and Friday.

In this article you will learn characteristics of school refusal behavior to watch for and assess, and treatment strategies for youths ages 5 to 17. You will also find advice and techniques to offer parents.

Figure

A child might exhibit each behavior on this spectrum at different times

| Substantial distress while attending school with pleas to parents for future nonattendance | Severe misbehaviors in the morning in an attempt to miss school | Chronic tardiness to school | Skipping certain classes or periods of school during the school day | Lengthy absences from school |

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REFUSAL BEHAVIOR CHARACTERISTICS

School refusal behavior encompasses all subsets of problematic absenteeism, such as truancy, school phobia, and separation anxiety.[3] Children and adolescents of all ages, boys and girls alike, can exhibit school refusal behavior. The most common age of onset is 10 to 13 years. Youths such as Nathan who are entering a school building for the first time—especially elementary and middle school—are at particular risk for school refusal behavior. Little information is available regarding ethnic differences, although school dropout rates for Hispanics are often considerably elevated compared with other ethnic groups.[4,5]

School refusal behavior covers a range of symptoms, diagnoses, somatic complaints, and medical conditions (*Tables* 1-3).[6-12] Longitudinal studies indicate that school refusal behavior, if left unaddressed, can lead to serious short-term problems, such as distress, academic decline, alienation from peers, family conflict, and financial and legal consequences. Common long-term problems include school dropout, delinquent behaviors, economic deprivation, social isolation, marital problems, and difficulty maintaining employment. Approximately 52% of adolescents with school refusal behavior meet criteria for an anxiety, depressive, conduct-personality, or other psychiatric disorder later in life.[13-16]

	Externalizing/overt symptoms
Table 1 **Common symptoms that could signal school refusal behavior** Internalizing/covert symptoms	

Enuresis	0.7%
Posttraumatic stress disorder	0.7%
Source: Reference 7	

Table 3 Somatic complaints and medical conditions commonly associated with school refusal behavior Somatic complaints	Medical conditions
Diarrhea/irritable bowel	Allergic rhinitis
Fatigue	Asthma and respiratory illness
Headache and stomachache	Chronic pain and illness (notably cancer, Crohn's disease, dyspepsia, hemophilia, chronic fatigue syndrome)
Nausea and vomiting	Diabetes
Palpitations and perspiration	Dysmenorrhea
Recurrent abdominal pain or other pain	Head louse infestation
Shaking or trembling	Influenza
Sleep problems	Orodental disease

FINDING A REASON FOR SCHOOL REFUSAL

If a child has somatic complaints, you can expect to find that the child is:

- suffering from a true physical malady

- embellishing low-grade physical symptoms from stress or attention-seeking behavior

- reporting physical problems that have no medical basis.

Depression	Aggression
Fatigue/tiredness	Clinging to an adult
Fear and panic	Excessive reassurance-seeking behavior
General and social anxiety	Noncompliance and defiance
Self-consciousness	Refusal to move in the morning
Somatization	Running away from school or home
Worry	Temper tantrums and crying

Table 2
Primary psychiatric disorders among youths with school refusal behavior Diagnosis

	Percentage
None	32.9%
Separation anxiety disorder	22.4%
Generalized anxiety disorder	10.5%
Oppositional defiant disorder	8.4%
Major depression	4.9%
Specific phobia	4.2%
Social anxiety disorder	3.5%
Conduct disorder	2.8%
Attention deficit/hyperactivity disorder	1.4%
Panic disorder	1.4%

A full medical examination is always recommended to rule out organic problems or to properly treat true medical conditions.

Four functions. If no medical condition is found, explore the reasons a particular child refuses school. A common model of conceptualizing school refusal behavior involves reinforcers:[1,2]

- **to avoid** school-based stimuli that provoke a sense of negative affectivity, or combined anxiety and depression; examples of key stimuli include teachers, peers, bus, cafeteria, classroom, and transitions between classes

- **to escape** aversive social or evaluative situations such as conversing or otherwise interacting with others or performing before others as in class presentations

- **to pursue** attention from significant others, such as wanting to stay home or go to work with parents

- **to pursue** tangible reinforcers outside of school, such as sleeping late, watching television, playing with friends, or engaging in delinquent behavior or substance use.

The first 2 functions are maintained by negative reinforcement or a desire to leave anxiety-provoking stimuli. The latter 2 functions are maintained by positive reinforcement, or a desire to pursue rewards outside of school. Youths may also refuse school for a combination of these reasons.[17] In Nathan's case, he was initially anxious about school in general (the first function). After his parents allowed him to stay home for a few days, however, he was refusing school to enjoy fun activities such as video games at home (the last function).

Box

Is there a link between school violence and absenteeism?

Violence on school campuses across the country naturally makes many parents skittish about possible copycat incidents. In fact, some parents acquiesce to their children's pleas to remain home on school shooting anniversaries—particularly the Columbine tragedy of April 20, 1999.

Student and parental fears likely are exacerbated by new episodes of violence, such as three school shootings in 2006:

- On September 27, a 53-year-old man entered a high school in Bailey, Colorado, and shot one girl before killing himself.

- On September 29, a high school student near Madison, Wisconsin, killed his principal after being disciplined for carrying tobacco.

- On October 2, a heavily armed man barricaded himself in a one-room Amish schoolhouse in Paradise, Pennsylvania. He bound and shot 11 girls before killing himself, and five of the girls died.

Compared with highly publicized school violence, however, personal victimization is a much stronger factor in absenteeism.[32] Specifically, school violence is related to school absenteeism especially for youths who have been previously victimized. The literature

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shows:

- Students who have been bullied are 2.1 times more likely than other students to feel unsafe at school.

- 20% of elementary school children report they would skip school to avoid being bullied.[33]

- High school students' fear of attending classes because of violence is directly associated with victimization by teachers or other students.

- Missing school because of feeling unsafe is a strong risk factor for asthma and, potentially, being sent home early from school.[34]

Assessment scale. One method for quickly assessing the role of these functions is the School Refusal Assessment Scale-Revised.[18,19] This scale poses 24 questions, the answers to which measure the relative strength of each of the 4 functions. Versions are available for children and parents, who complete their respective scales separately (*see* Related resources). Item means are calculated across the measures to help determine the primary reason for a child's school refusal.

In addition to using the assessment scale, you may ask interview questions regarding the form and function of school refusal behavior (*Tables* 4,5). Take care to assess attendance history and patterns, comorbid conditions, instances of legitimate absenteeism, family disruption, and a child's social and academic status. Specific questions about function can help narrow the reason for school refusal.

Assess specific school-related stimuli that provoke absenteeism such as social and evaluative situations, whether a child could attend school with a parent (evidence of attention-seeking), and what tangible rewards a child receives for absenteeism throughout the school day. Information about the form and function of school refusal behavior may also be evident during in-office observations of the family. Data from the School Refusal Assessment Scale-Revised, interviews, and observations can then be used to recommend particular treatment options.

Table 4 Questions related to *forms* of school refusal behavior What are the child's specific forms of absenteeism, and how do these forms change daily?	What specific school-related stimuli are provoking the child's concern about going to school?
Is a child's school refusal behavior relatively acute or chronic in nature (in related fashion, how did the child's school refusal behavior develop over time)?	Is the child's refusal to attend school legitimate or understandable in some way (eg, school-based threat, bullying, inadequate school climate)?
What comorbid conditions occur with a child's school refusal behavior (Table 3),	What family disruption or conflict has occurred as a result of a child's school refusal behavior?

including substance abuse?	
What is the child's degree of anxiety or misbehavior upon entering school, and what specific misbehaviors are present in the morning before school (Table 2)?	**What is the child's** academic and social status? (This should include a review of academic records, formal evaluation reports, attendance records, and individualized education plans or 504 plans as applicable.)

Table 5

Questions related to _functions_ of school refusal behavior

Have recent or traumatic home or school events influenced a child's school refusal behavior?	**Is the child** willing to attend school if a parent accompanies him or her?
Are symptoms of school refusal behavior evident on weekends and holidays?	**What specific** tangible rewards does the child pursue outside of school that cause him or her to miss school?
Are there any nonschool situations where anxiety or attention-seeking behavior occurs?	**Is the child** willing to attend school if incentives are provided for attendance?
What specific social and/or evaluative situations at school are avoided?	

TREATING YOUTHS WHO REFUSE SCHOOL

Treatment success will be better assured if you work closely with school personnel and parents to gather and share information, coordinate a plan for returning a child to school, and address familial issues and the child's comorbid medical problems that impact attendance.

Medications have proven useful in alleviating severe cases of anxiety and depression, and cognitive management techniques can be applied to the child, the parents, and the family together.

Anxiolytics or antidepressants. Pharmacotherapy research for school refusal behavior is in its infancy. Some investigators have found, however, that a tricyclic antidepressant (TCA) such as imipramine, 3 mg/kg/d, may be useful in some cases[20,21]—generally for youths ages 10 to 17 years with better attendance records and fewer symptoms of social avoidance and separation anxiety.[22] Researchers speculate that TCAs, which are not always effective in children, may influence symptoms such as anhedonia or sleep problems that contribute to school refusal behavior.

With respect to substantial child anxiety and depression without school refusal behavior, researchers have focused on selective serotonin reuptake inhibitors (SSRIs). In particular, fluoxetine, 10 to 20 mg/d, fluvoxamine, 50 to 250 mg/d, sertraline, 85 to 160 mg/d, and

paroxetine, 10 to 50 mg/d, have been useful for youths with symptoms of general and social anxiety and depression.[23,24]

Youths often do not respond to these medications as well as adults do, however, because of the fluid and amorphous nature of anxious and depressive symptomatology in children and adolescents. Careful monitoring is required when treating youth with SSRIs, which have been associated with an increased risk of suicidal behavior.

Psychological techniques. Sophisticated clinical controlled studies have addressed the treatment of diverse youths with school refusal behavior.[25-28] Options for this population may be arranged according to function or the primary reinforcers maintaining absenteeism:

- child-based techniques to manage anxiety in a school setting

- parent-based techniques to manage contingencies for school attendance and nonattendance

- family-based techniques to manage incentives and disincentives for school attendance and nonattendance.

Child-based anxiety management techniques include relaxation training, breathing retraining, cognitive therapy (generally for youths ages 9 to 17), and exposure-based practices to gradually reintroduce a child to school. These techniques have been strongly supported by randomized controlled trials specific to school refusal behavior[2] and are useful for treating general anxiety and depression as well.

Parent-based contingency management techniques include establishing morning and evening routines, modifying parental commands toward brevity and clarity, providing attention-based consequences for school nonattendance (such as early bedtime, limited time with a parent at night), reducing excessive child questioning or reassurance-seeking behavior, and engaging in forced school attendance under strict conditions. Parent-based techniques have received strong support in the literature in general[29] but have been applied less frequently than child-based techniques to youths with school refusal behavior.

Family-based techniques include developing written contracts to increase incentives for school attendance and decrease incentives for nonattendance, escorting a child to school and classes, and teaching youths to refuse offers from peers to miss school.[30] As with parent-based techniques, family-based techniques have received strong support in the literature in general, but have been applied less frequently than child-based techniques to youths with school refusal behavior.

GRADUAL REINTRODUCTION TO SCHOOL

A preferred approach to resolve school refusal behavior usually involves gradual reintegration to school and classes. This may include initial attendance at lunchtime, 1 or 2 favorite classes, or in an alternative classroom setting such as a guidance counselor's office or school library. Gradual reintegration into regular classrooms may then proceed.

If possible, a child should remain in school during the day and not be sent home unless intense medical symptoms are present.[30] A recommended list of intense symptoms includes:

- frequent vomiting

- bleeding

- temperature >100° F

- severe diarrhea

- lice

- acute flu-like symptoms

- extreme medical conditions such as intense pain.

Case continued: a full-time student.

A structured diagnostic interview and other behavioral assessment measures show that Nathan meets criteria for generalized anxiety disorder. He worries excessively about his social and academic performance at school and displays several somatic complaints related to anxiety. His treatment thus involves a two-pronged approach:

- *sertraline, 50 mg/d, which has been found to significantly reduce symptoms of generalized anxiety disorder in youths ages 5 to 17.*

- *child-based anxiety management techniques and family therapy to increase incentives for school attendance and limit fun activities during a school day spent at home.*

His therapist and family physician collaborate with school personnel to gradually reintroduce Nathan to a full-time academic schedule.

Related resources

- Copies of the child and parent versions of the School Refusal Assessment Scale-Revised are available at www.jfponline.com/Pages.asp?AID=4322&UID= or contact Dr. Kearney at chris.kearney@gmail.com.

- King NJ, Bernstein GA. School refusal in children and adolescents: a review of the past 10 years. *J Am Acad Child Adolesc Psychiatry* 2001;40:197-205.

- Kearney CA. *School refusal behavior in youth: a functional approach to assessment and treatment.* Washington, DC: American Psychological Association; 2001.

- Kearney CA, Albano AM. *When children refuse school: a cognitive-behavioral therapy approach. Parent workbook/therapist's guide.* New York: Oxford University Press; 2000.

Drug brand names

Fluoxetine • Prozac
Fluvoxamine • Luvox
Imipramine • Tofranil
Paroxetine • Paxil

Sertraline • Zoloft

Acknowledgment

References

1. Kearney CA, Silverman WK. The evolution and reconciliation of taxonomic strategies for school refusal behavior. *Clin Psychol: Sci Prac* 1996;3:339–54.

2. Kearney CA. *School refusal behavior in youth: a functional approach to assessment and treatment.* Washington, DC: American Psychological Association; 2001.

3. Hansen C, Sanders SL, Massaro S, Last CG. Predictors of severity of absenteeism in children with anxiety-based school refusal. *J Clin Child Psychol* 1998;27:246–54.

4. Franklin CG, Soto I. Keeping Hispanic youths in school. *Children & Schools* 2002;24:139–43.

5. Egger HL, Costello EJ, Angold A. School refusal and psychiatric disorders: a community study. *J Am Acad Child Adolesc Psychiatry* 2003;42:797–807.

6. McShane G, Walter G, Rey JM. Characteristics of adolescents with school refusal. *Aust New Zeal J Psychiatry* 2001;35:822–6.

7. Kearney CA, Albano AM. The functional profiles of school refusal behavior: diagnostic aspects. *Behav Modif* 2004;28:147–61.

8. Bernstein GA, Massie ED, Thuras PD, Perwien AR, Borchardt CM, Crosby RD. Somatic symptoms in anxious-depressed school refusers. *J Am Acad Child Adolesc Psychiatry* 1997;36:661–8.

9. Gilliland FD, Berhane K, Islam T, et al. Environmental tobacco smoke and absenteeism related to respiratory illness in school children. *Am J Epidemiology* 2003;157:861–9.

10. Glaab LA, Brown R, Daneman D. School attendance in children with type I diabetes. *Diabetic Med* 2005;22:421–6.

11. Levy RL, Whitehead WE, Walker LS, et al. Increased somatic complaints and health-care utilization in children: effects of parent IBS status and parent response to gastrointestinal symptoms. *Am J Gastroenterology* 2004;99:2442–51.

12. Buitelaar JK, van Andel H, Duyx JHM, van Strien DC. Depressive and anxiety disorders in adolescence: a follow-up study of adolescents with school refusal. *Acta Paedopsychiatrica* 1994;56:249–53.

13. Flakierska-Praquin N, Lindstrom M, Gillberg C. School phobia with separation anxiety disorder: a comparative 20- to 29-year follow-up study of 35 school refusers. *Comp Psychiatry* 1997;38:17–22.

14. Hibbett A, Fogelman K. Future lives of truants: family formation and health-related behaviour. *Brit J Educ Psychology* 1990;60:171–9.

15. Hibbett A, Fogelman K, Manor O. Occupational outcomes of truancy. *Brit J Educ Psychology* 1990;60:23–36.

16. Kearney CA. Bridging the gap among professionals who address youth with school absenteeism: overview and suggestions for consensus. *Prof Psychol Res Prac* 2003;34:57–65.

17. King NJ, Heyne D, Tonge B, Gullone E, Ollendick TH. School refusal: categorical diagnoses, functional analysis and treatment planning. *Clin Psychol Psychother* 2001;8:352–60.

18. Kearney CA. Identifying the function of school refusal behavior: a revision of the School Refusal Assessment Scale. *J Psychopathol Behav Assess* 2002;24:235–45.

19. Kearney CA. Confirmatory factor analysis of the School Refusal Assessment Scale-Revised: child and parent versions.*J Psychopathol Behav Assess* 2006; in press.

20. Bernstein GA, Borchardt CM, Perwein AR, et al. Imipramine plus cognitive-behavioral therapy in the treatment of school refusal. *J Am Acad Chil Adol Psychiatry* 2000;39:276–83.

21. Kearney CA, Silverman WK. A critical review of pharmacotherapy for youth with anxiety disorders: things are not as they seem. *J Anxiety Disord* 1998;12:83–102.

22. Layne AE, Bernstein GA, Egan EA, Kushner MG. Predictors of treatment response in anxious-depressed adolescents with school refusal. *J Am Acad Chil Adol Psychiatry* 2003;42:319–26.

23. Compton SN, Grant PJ, Chrisman AK, et al. Sertraline in children and adolescents with social anxiety disorder: an open trial. *J Am Acad Chil Adol Psychiatry* 2001;40:564–71.

24. Whittington CJ, Kendall T, Fonagy T, et al. Selective serotonin reuptake inhibitors in childhood depression: systematic review of published versus unpublished data. *Lancet* 2004;363:1341–5.

25. Kearney CA, Silverman WK. Functionally-based prescriptive and nonprescriptive treatment for children and adolescents with school refusal behavior. *Behav Ther* 1999;30:673–95.

26. King NJ, Tonge BJ, Heyne D, et al. Cognitive-behavioral treatment of school-refusing children: A controlled evaluation. *J Am Acad Chil Adol Psychiatry* 1998;37:395–403.

27. Last CG, Hansen C, Franco N. Cognitive-behavioral treatment of school phobia. *J Am Acad Chil Adol Psychiatry* 1998;37:404–11.

28. Ebell MH, Siwek J, Weiss BD, et al. Strength of recommendation taxonomy (SORT): a patient-centered approach to grading evidence in the medical literature. *J Fam Pract* 2004;53:111–20.

29. Kearney CA, Roblek TL. Parent training in the treatment of school refusal behavior.In: Briesmeister JM, Schaefer CE, eds. *Handbook of parent training: parents as co-therapists for children's behavior problems, 2nd ed.* New York: Wiley; 1998:225-56.

30. Kearney CA, Albano AM. *When children refuse school: A cognitive-behavioral therapy approach/Therapist's guide.* San Antonio: Psychological Corporation, 2000.

31. Kearney CA, Bates M. Addressing school refusal behavior: Suggestions for frontline professionals. *Children & Schools* 2005;27:207–16.

32. Astor RA, Benbenishty R, Zeira A, Vinokur A. School climate, observed risky behaviors, and victimization as predictors of high school students' fear and judgments of school violence as a problem. *Health Educ Behav* 2002;29:716–36.

33. Glew GM, Fan M-Y, Katon W, Rivara FP, Kernic MA. Bullying, psychosocial adjustment, and academic performance in elementary school. *Arch Pediatr Adolesc Med* 2005;159:1026–31.

34. Swahn MH, Bossarte RM. The associations between victimization, feeling unsafe, and asthma episodes among US high-school students. *Am J Public Health* 2006;96

Confirmatory Factor Analysis of the School Refusal Assessment Scale-Revised: Child and Parent Versions

Christopher A. Kearney[1,2]

The School Refusal Assessment Scale-Revised (SRAS-R) is an instrument designed to evaluate the relative strength of four functional conditions of school refusal behavior in youth. Although previous work has shown the scale's child and parent versions to show good reliability, verification of the SRAS-R factor structure remains necessary. The present study investigated administrations of the child and parent versions of the SRAS-R (SRAS-R-C and SRAS-R-P) using confirmatory factor analysis. For both measures, four-factor models were supported following the removal of two SRAS-R-C and three SRAS-R-P items. Three-factor and two-factor models for each SRAS-R version were not supported. Ramifications of these results for use of the SRAS-R are discussed.

KEY WORDS: school refusal assessment scale-revised.

School refusal behavior is a common mental, health, and educational problem that refers to a child-motivated refusal to attend school and/or difficulties remaining in classes for an entire day (Kearney & Silverman, 1996). The clinical characteristics of this population have been described elsewhere, but largely consist of a heterogeneous array of internalizing and externalizing behavior problems and troublesome family dynamics (Kearney, 2001; Kearney & Albano, 2004). Left unaddressed, school refusal behavior can lead to serious long-term consequences such as school dropout, delinquency, and, in adulthood, marital, occupational, and psychiatric problems (Hibbett & Fogelman, 1990).

Although various treatments for youths with school refusal behavior have been evaluated in recent years, comprehensive taxonomic and assessment strategies for this population remain needed (Kearney, 2003). One strategy that has been developed is a functional model that organizes this population according to the negative and positive reinforcers received for problematic absenteeism. In this model, youths are hypothesized to refuse school to (1) avoid stimuli that provoke negative affectivity, (2) escape aversive social and/or evaluative situations, (3) pursue attention from significant others, and/or (4) pursue tangible reinforcers outside of school.

The four functional conditions listed here were originally intended to be orthogonal in nature, and each was to be assigned a specific prescriptive treatment package to bolster therapeutic effectiveness. Indeed, the model has been used preliminarily to predict successful and unsuccessful prescriptive treatment for youths with school refusal behavior (Chorpita, Albano, Heimberg, & Barlow, 1996; Kearney, 2002a; Kearney, Pursell, & Alvarez, 2001; Kearney & Silverman, 1990, 1999).

A primary assessment tool regarding this functional model is the School Refusal Assessment Scale (SRAS) (Kearney & Silverman, 1993). The original SRAS was a 16-item instrument that contained 4 items devoted to each of the 4 functional conditions mentioned above. Child and parent versions of the scale were developed. Item means were averaged across administered versions of the scale to derive a functional profile that included the primary and secondary reasons why a particular child was refusing school. The original SRAS versions were largely reliable across time and between parent raters.

In addition, as expected, the negative reinforcement functions (1 and 2) were uncorrelated with the positive reinforcement functions (3 and 4). However, the negative reinforcement functions tended to be highly intercorre-

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lated (Higa, Daleiden, & Chorpita, 2002). These findings have raised the question of whether the SRAS and the functional model it represents are best illustrated by a two-factor (i.e., negative versus positive reinforcement) or a three-factor (i.e., negative reinforcement, attention, and tangible reinforcement) model. One of the goals of the present study was to statistically determine the fit of these various models.

The SRAS was later revised in an attempt to increase the psychometric strength of the scale and to reflect changes in the functional model over time. In the revised child and parent versions (SRAS-R-C and SRAS-R-P), 24 items were equally divided across the 4 functions. All SRAS-R-C and SRAS-R-P items displayed good test–retest reliability and 22 SRAS-R-P items displayed good parent interrater reliability. In addition, the negative reinforcement functions, as expected, were more greatly associated with internalizing behavior problems and diagnoses than the positive reinforcement functions. Positive reinforcement functions were more greatly associated, as expected, with externalizing behavior problems and diagnoses. Functional scores from the SRAS and SRAS-R also correlated significantly, providing some evidence of concurrent validity for the revised scale (Kearney, 2002b).

Given a lack of clarity about the orthogonal nature of the proposed functional conditions, examining the structure of the School Refusal Assessment Scale-Revised using confirmatory factor analysis (CFA) would seem crucial. When scale factors have been initially hypothesized or explicated, use of CFA is most appropriate to verify factor structure (Thompson, 2004). The purpose of this study was thus to conduct a CFA on the child and parent versions of the School Refusal Assessment Scale-Revised to determine the validity of their factor structure. The four-factor structure, with accompanying items, was expected to be supported for both versions. In addition, three- and two-factor structures were not expected to be supported.

METHOD

Participants

Data for this study included SRAS-R-C and SRAS-R-P administrations from a previous examination of the scales' psychometric strength (Kearney, 2002b) as well as new administrations. For youths, previous SRAS-R-C administrations included 115 youths housed at a juvenile detention facility and 53 youths referred to a specialized university outpatient clinic (total, 168). The characteristics of this sample have been described previously (Kearney,

2002b), but all had school refusal behavior as a primary behavior problem. New SRAS-R-C administrations included 45 youths referred to a specialized university outpatient clinic for primary school refusal behavior. These youths were largely male (75.6%), had a mean age of 11.4 years (SD = 2.53), had missed an average of 44.7% of school time at assessment (SD = 31.2), and were European American (84.4%), Hispanic (8.9%), African American (2.2%) or other (4.4%). These characteristics were equivalent to those of the previous samples (Kearney, 2002b). A total of 213 SRAS-R-C administrations were thus utilized for this study.

For parents, previous SRAS-R-P administrations included parents of the youths referred to a specialized university outpatient clinic (no parent data had been collected from the juvenile detention sample). These administrations included 112 from the parent interrater reliability analysis and 26 from the parent test–retest reliability analysis who were not part of the interrater reliability analysis (total, 138). New scale administrations included 45 parents of youths recently referred to a specialized university outpatient clinic. Families of these youths were largely dual-parent in nature (60.0%) with a mean annual income of $48,670. These characteristics were equivalent to those of the previous sample (Kearney, 2002b). A total of 183 SRAS-R-P administrations were thus utilized for this study.

Measure

The School Refusal Assessment Scale-Revised is a 24-item measure of the relative strength of four hypothesized functions of school refusal behavior in children and adolescents. Six items are devoted to each functional condition in sequential order: items 1, 5, 9, 13, 17, and 21 comprise the avoidance of stimuli provoking negative affectivity function, items 2, 6, 10, 14, 18, and 22 comprise the escape from aversive social and/or evaluative situations function, items 3, 7, 11, 15, 19, and 23 comprise the attention-seeking function, and items 4, 8, 12, 16, 20, and 24 comprise the tangible reinforcement function. Items are rated on a Likert-type scale from 1 (never) to 7 (always). Item wording can be found in Kearney (2002b).

Test–retest reliability across 7–14-day intervals for the four SRAS-R-C functional condition scores has been found to be .64, .73, .78, and .56, respectively. Test–retest reliability across 7–14-day intervals for the four SRAS-R-P functional condition scores has been found to be .63, .67, .78, and .61, respectively. All SRAS-R-C and SRAS-R-P items also displayed statistically significant test–retest reliability. Interrater reliability across mother and father

reports for the four SRAS-R-P functional condition scores has been found to be .57, .49, .64, and .46, respectively. All values represent Pearson coefficients and are statistically significant (Kearney, 2002b).

Procedure and data analysis

Child and parent versions of the SRAS-R were administered as part of a comprehensive assessment of youths with primary school refusal behavior. Assessments were conducted within a juvenile detention facility or university-based outpatient clinic. Within the clinic setting, versions of the SRAS-R were administered in conjunction with structured diagnostic interviews, child self-report measures of negative affectivity, general and social anxiety, fear, depression, and self-esteem, and parent and teacher measures of family environment and internalizing and externalizing behavior problems. All parties were instructed to answer SRAS-R items independently and to consult with their assigned therapist when questions arose. Interviews with school officials, reviews of relevant records, and behavioral observations were also conducted.

Data analysis for the SRAS-R-C and SRAS-R-P involved confirmatory factor analysis (CFA) using EQS (Bentler & Wu, 2005). The original four-factor models of the SRAS-R-C and SRAS-R-P were subjected to CFA, and three goodness-of-fit indices were examined to test the models. These indices included the comparative fit index (CFI), standardized root mean-square residual (SRMR), and root mean square error of approximation (RMSEA). Multiple indices of fit are typically recommended when conducting a CFA. Acceptable goodness-of-fit in this study was defined as CFI values of .90+ and SRMR and RMSEA values of <.10. In addition, the upper end of the 90% confidence interval for the RMSEA should be <.10 (Kline, 2005). Model trimming consisted of removing the weakest paths until criteria for goodness-of-fit were met.

RESULTS

School Refusal Assessment Scale-Revised-Child

The original four-factor, 24-item model for the SRAS-R-C proposed by Kearney (2002b) was not supported by all three indices of fit (CFI = .861, SRMR = .085, and RMSEA = .073, 90% confidence interval: .064–.082). Model trimming then consisted of removing the weakest path coefficients from this model, which included items 20 (.20) and 24 (.31). Removal of these items produced a four-factor model that was supported by

all three indices of fit (CFI = .911, SRMR = .075, and RMSEA = .062, 90% confidence interval: .052 – .072) (see Fig. 1). Cronbach's alpha values for each of the four functional conditions, respectively, were .82, .80, .87, and .74.

An examination of alternative models was conducted, but none were supported by all three indices of fit. A three-factor solution that combined functions 1 and 2 (negative reinforcement) (CFI = .806) and a similar three-factor solution with items 20 and 24 removed (CFI = .852) were not supported. In addition, a two-factor solution that combined functions 1 and 2 (negative reinforcement) and combined functions 3 and 4 (positive reinforcement) (CFI = .713) was not supported.

School Refusal Assessment Scale-Revised-Parent

The original four-factor, 24-item model for the SRAS-R-P proposed by Kearney (2002b) was not supported by all three indices of fit (CFI = .827, SRMR = .094, and RMSEA = .090, 90% confidence interval: .079–.101). Model trimming then consisted of removing the weakest path coefficients from this model, which included items 20 (.07), 24 (.44), and 18 (.47). Removal of these items produced a four-factor model that was supported by all three indices of fit (CFI = .938, SRMR = .078, and RMSEA = .069, 90% confidence interval: .047 – .089) (see Fig. 2). Cronbach's alpha values for each of the four functional conditions, respectively, were .86, .86, .88, and .78.

An examination of alternative models was conducted, but none were supported by all three indices of fit. A three-factor solution that combined functions 1 and 2 (negative reinforcement) (CFI = .723) and a similar three-factor solution with items 18, 20, and 24 removed (CFI = .776) were not supported. In addition, a two-factor solution that combined functions 1 and 2 (negative reinforcement) and combined functions 3 and 4 (positive reinforcement) (CFI = .599) was not supported.

DISCUSSION

This study is the first to examine the factor structure of the child and parent versions of the School Refusal Assessment Scale-Revised using confirmatory factor analysis. Results indicated that the four-factor structures of the SRAS-R-C and SRAS-R-P were supported with the exception of a few items. In particular, items 20 and 24 seemed to detract from the SRAS-R-C and SRAS-R-P. Item 18 also seemed to detract from the SRAS-R-P.
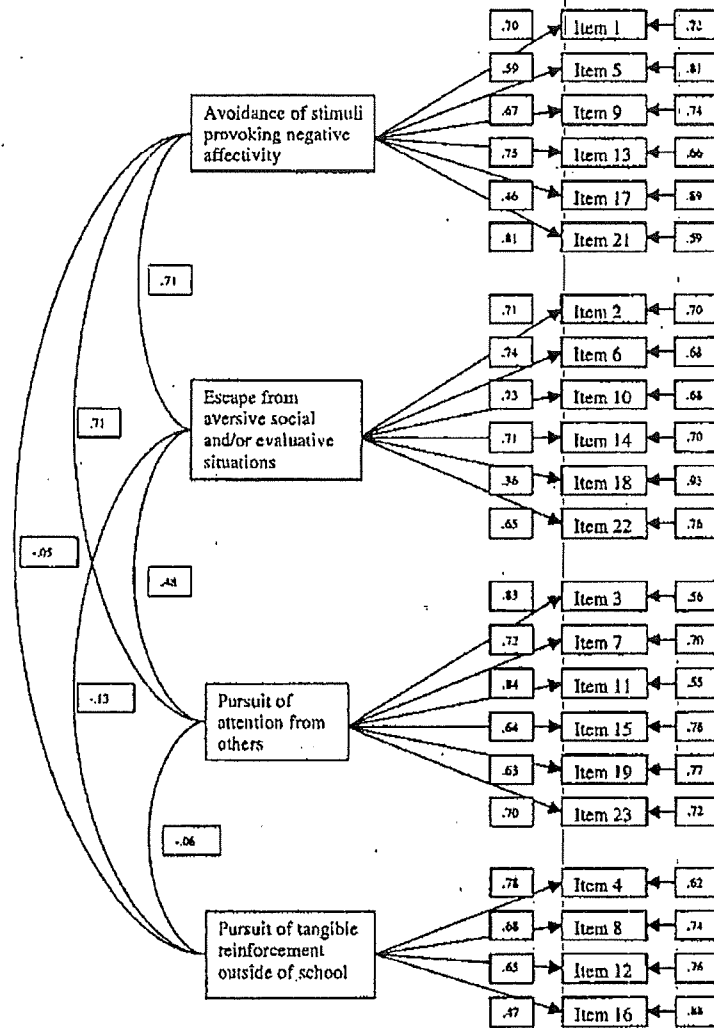
Fig. 1. Four-factor model of the School Refusal Assessment Scale-Revised (child version) with standardized path coefficients.

Items 20 and 24 are part of the tangible reinforcement function of the SRAS-R. Item 18 is part of the escape from aversive social and/or evaluative situations function of the SRAS-R.

On the SRAS-R-C, items 20 and 24 are worded as follows: "Would it be easier for you to go to school if you could do more things you like to do after school hours (e.g., being with friends)?" and "Would you rather be doing fun things outside of school more than most kids your age?" On the SRAS-R-P, items 20 and 24 are worded as follows: "Would it be easier for your child to go to school if he/she could do more things he/she likes to do after school hours (e.g., being with friends)?" and "Would your child rather be doing fun things outside of school more than most kids his/her age?" On the SRAS-R-P, item 18 is worded as follows: "If it were easier for your child to make new friends, would it be easier for him/her to go to school?"

Item 20 may be confusing and interpreted in different ways. The question was designed to reflect greater ease
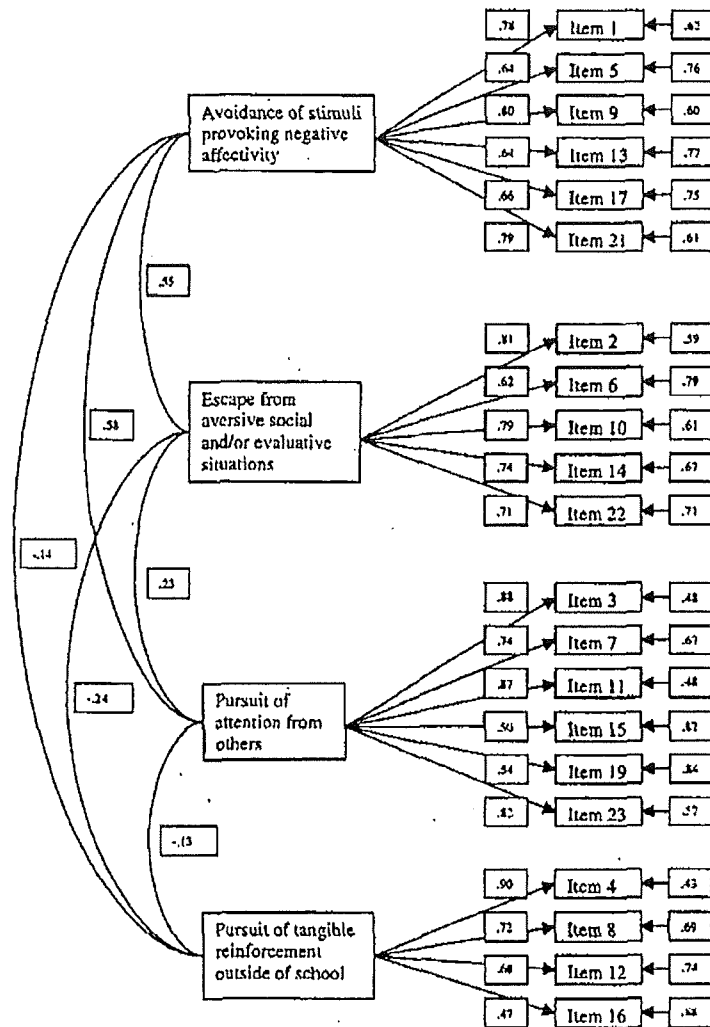
Fig. 2. Four-factor model of the School Refusal Assessment Scale-Revised (parent version) with standardized path coefficients.

of school attendance if more "fun things" were available *in school*, but those completing the measure may have inferred "fun things" available *after school*. In the case of item 24, a comparison to other children may be problematic if a child has been out of school for some time. Indeed, youths who refuse school for tangible reinforcement generally have more problematic absenteeism than youths of other functional conditions (Kearney, 2001), SRAS-R-P items 20 and 24 have demonstrated weak interrater reliability as well (Kearney, 2002b). Finally, in the case of item 18, some parents may be unsure about their child's

ability to make new friends or how such ability may affect school attendance.

Clinicians and researchers who use the SRAS-R are thus encouraged to exercise caution when using items 18, 20, and 24. Even if these items are removed, however, a sufficient number of SRAS-R items remain to conduct an adequate descriptive functional analysis of school refusal behavior. In addition, an examination of path coefficients among the functions indicates that the tangible reinforcement function is not highly associated with other functions. At any rate, the SRAS-R has been advocated as part

of a comprehensive assessment process for this complex population. Results from SRAS-R administrations should be utilized with various sources of information as well as observational data and records (Daleiden, Chorpita, Kollins, & Drabman, 1999; Kearney, 2004; Kearney & Albano, 2000).

Despite the presence of a small number of items that may detract from the scale, strong support was found overall for the four-factor structures of the SRAS-R-C and SRAS-R-P. These data provide support for the functional model of school refusal behavior in general and the discriminant validity of the SRAS-R in particular. Directions for future research include fine-tuning items, examining more diverse samples of youths, fully evaluating the link between identified function and successful prescriptive treatment, and developing other SRAS versions, particularly for teachers or other school personnel.

REFERENCES

Bentler, P. M., & Wu, E. J. C. (2005). *EQS 6.1 for Windows*. Encino, CA: Multivariate Software.

Chorpita, B. F., Albano, A. M., Heimberg, R. G., & Barlow, D. H. (1996). A systematic replication of the prescriptive treatment of school refusal behavior in a single subject. *Journal of Behavior Therapy and Experimental Psychiatry, 27,* 281–290.

Daleiden, E. L., Chorpita, B. F., Kollins, S. H., & Drabman, R. S. (1999). Factors affecting the reliability of clinical judgments about the function of children's school-refusal behavior. *Journal of Clinical Child Psychology, 28,* 396–406.

Hibbett, A., & Fogelman, K. (1990). Future lives of truants: Family formation and health-related behaviour. *British Journal of Educational Psychology, 60,* 171–179.

Higa, C. K., Daleiden, E. L., & Chorpita, B. F. (2002). Psychometric properties and clinical utility of the School Refusal Assessment Scale in a multiethnic sample. *Journal of Psychopathology and Behavioral Assessment, 24,* 247–258.

Kearney, C. A. (2001). *School refusal behavior in youth: A functional approach to assessment and treatment.* Washington, DC: American Psychological Association.

Kearney, C. A. (2002a). Case study of the assessment and treatment of a youth with multifunction school refusal behavior. *Clinical Case Studies, 1,* 67–80.

Kearney, C. A. (2002b). Identifying the function of school refusal behavior: A revision of the School Refusal Assessment Scale. *Journal of Psychopathology and Behavioral Assessment, 24,* 235–245.

Kearney, C. A. (2003). Bridging the gap among professionals who address youth with school absenteeism: Overview and suggestions for consensus. *Professional Psychology: Research and Practice, 34,* 57–65.

Kearney, C. A., & Albano, A. M. (2000). *When children refuse school: A cognitive-behavioral therapy approach/Therapist's guide.* New York: Oxford University Press.

Kearney, C. A. (2004). School refusal behavior. In W. E. Craighead & C. B. Nemeroff (Eds.), *The concise corsini encyclopedia of psychology and behavioral science* (3rd. ed.) (pp. 851–852). New York: Wiley.

Kearney, C. A., & Albano, A. M. (2004). The functional profiles of school refusal behavior: Diagnostic aspects. *Behavior Modification, 28,* 147–161.

Kearney, C. A., Pursell, C., & Alvarez, K. (2001). Treatment of school refusal behavior in children with mixed functional profiles. *Cognitive and Behavioral Practice, 8,* 3–11.

Kearney, C. A., & Silverman, W. K. (1990). A preliminary analysis of a functional model of assessment and treatment for school refusal behavior. *Behavior Modification, 14,* 340–366.

Kearney, C. A., & Silverman, W. K. (1993). Measuring the function of school refusal behavior: The School Refusal Assessment Scale. *Journal of Clinical Child Psychology, 22,* 85–96.

Kearney, C. A., & Silverman, W. K. (1996). The evolution and reconciliation of taxonomic strategies for school refusal behavior. *Clinical Psychology: Science and Practice, 3,* 339–354.

Kearney, C. A., & Silverman, W. K. (1999). Functionally-based prescriptive and nonprescriptive treatment for children and adolescents with school refusal behavior. *Behavior Therapy, 30,* 673–695.

Kline, R. B. (2005). *Principles and practice of structural equation modeling* (2nd ed.). New York: Guilford.

Thompson, B. (2004). *Exploratory and confirmatory factor analysis: Understanding concepts and applications.* Washington, DC: American Psychological Association.