Published in final edited form as:
Child Dev Perspect. 2009 April 1; 3(1): 11–20. doi:10.1111/j.1750-8606.2008.00070.x.

Psychosocial Interventions for School Refusal Behavior in Children and Adolescents

Armando A. Pina[1], **Argero A. Zerr**[1], **Nancy A. Gonzales**[1], and **Claudio D. Ortiz**[2]

[1] Arizona State University

[2] The Pennsylvania State University

Abstract

This article reviews empirical evidence for the efficacy of psychosocial interventions for school refusal behavior. Data corresponding to eight experimental single-case and seven group-design studies are presented. Across studies, behavioral and cognitive-behavioral treatments emerged as promising lines of intervention. These interventions produced improvements in school attendance and youths'symptom levels (e.g., anxiety, fear, depression, anger) based on this study's examination of effect sizes. The article concludes with suggestions for interventionists, researchers, and policymakers attempting to deal with the problem of school refusal.

While research on school refusal behavior in children and adolescents has a long history (e.g., Berg, Nichols, & Pritchard, 1969; Broadwin, 1932), this area has received increased attention in recent years (e.g., Berg & Nursten, 1996; Chiland & Gerard, 1990; King, Ollendick, & Tonge, 1995; Silverman & Pina, 2007). Silverman and Kearney (e.g., Kearney, 2007; Kearney & Silverman, 1990; 1993) offer what can be considered the most comprehensive conceptualization of school refusal behavior. According to this conceptualization, school refusal behavior is a child's refusal to attend or stay in school, motivated by the desire (1) to avoid school-based stimuli that provoke negative affectivity (e.g., anxiety, depression); (2) to escape aversive social or evaluative situations (e.g., difficulty making friends or talking to others in class or in front of the class); (3) to get attention from significant others (e.g., parents); and/or (4) to pursue tangible reinforcers outside school (e.g., going to the mall) (Kearney & Albano, 2004; Kearney & Silverman, 1996).

One reason why school refusal behavior has recently received increased attention is the accumulating evidence of potentially severe negative outcomes associated with it. Not surprisingly, school refusers exhibit poor academic achievement partially due to high levels of school absenteeism (e.g., Lamdin, 1996). Moreover, school refusers often miss important school-related developmental experiences (e.g., Chávez, Belkin, Hornback, & Adams, 1991) and are at risk for dropping out of school (Alexander, Entwisle, & Kabbani, 2001; Rumberger, Ghatak, Poulos, Ritter, & Dornbusch, 1990).

The research literature also shows that school refusers tend to exhibit poor social skills and social isolation (e.g., Place, Hulsmeier, Davis, & Taylor, 2002). They often reside in homes with high levels of family conflict and tend to report low self-efficacy for coping with stressful situations (e.g., Bernstein & Borchardt, 1996). These psychosocial factors likely place school refusers at increased risk for additional maladaptive outcomes, including poor

Correspondence concerning this article should be addressed to Armando A. Pina, Ph.D., P.O., Box 871104, Child and Family Intervention Program, Department of Psychology, Arizona State, University, Tempe, AZ 85287-1104. Armando.Pina@asu.edu.

mental health. Specifically, some youth with school refusal behavior have been found to meet Diagnostic Statistical Manual for Mental Disorders (DSM-IV; American Psychiatric Association, 1994) criteria for separation anxiety disorder, social phobia, and/or depression (Lyon & Cotler, 2007).

Due to the above-mentioned risks and the high prevalence of school refusal behavior, estimated to be as high as 35% (Canino, Gould, Prupis, & Shaffer, 1986; Burke & Silverman, 1987), efficacious interventions for this problem have the potential to produce large public health benefits. This article summarizes progress toward this goal by reviewing empirical evidence regarding the efficacy of interventions designed to target school refusal behavior in children and adolescents. More specifically, the article presents data corresponding to each of the studies selected for inclusion, as well as effect sizes (calculated when feasible). The article also includes an evaluative summary of this research with an eye toward critical unresolved issues. Suggestions for interventionists, researchers, and policymakers also are offered.

Psychosocial Interventions for School Refusal Behavior

Search and Selection of Studies

To identify interventions for school refusal behavior, a search using “school refusal” as keywords was conducted of English-language, peer-reviewed journal articles reporting data on school-age youth (5 to 17 years old). This search resulted in 242 articles, 67 of which were identified as possible intervention articles. Two evaluators coded the 67 articles as either single-case experimental design studies (Barlow & Hersen, 1976) or group-design studies (studies comparing two or more treatment conditions using randomized or nonrandomized procedures; Rubin, 1974). The two evaluators independently rated all articles using standardized coding sheets. Discrepancies in the classifications were discussed between the two raters and the first author, with the classification viewed as “final” once full consensus was attained among all parties. Based on these procedures, 44 clinical anecdotal case studies were excluded, as well as 8 articles reporting on the use of pharmacological agents for reducing school refusal behavior. The remaining 15 articles were included in the review, 8 single-case experimental design studies and 7 group-design studies. The overall kappa coefficient of agreement between the two evaluators for this classification was .89.

Psychosocial Intervention Studies

Evaluation of the selected studies revealed that most of the intervention research literature focused on the question of whether behavioral and cognitive strategies can effectively reduce symptoms associated with school refusal and increase school attendance. More specifically, Table 1 shows that all interventions tested in experimental single-case design studies used behavioral strategies such as positive reinforcement for gradual exposures to time at school or in the classroom (e.g., Brown et al., 1974;Gosschalk, 2004;Hagopian & Slifer, 1993;Houlihan & Jones, 1989;Moffitt, Chorpita, & Fernandez, 2003) and social skills training for handling school situations (Esveldt-Dawson, Wisner, Unis, Matson, & Kazdin, 1982;Moffitt et al., 2003).

Five of the single-case design studies tested single procedures (i.e., Brown et al., 1974; Chorpita, Albano, Heimberg, & Barlow, 1996; Houlihan & Jones, 1989; Hagopian & Slifer, 1993; Kolko, Ayllon, & Torrence, 1987), and the remaining three studies tested a combination of procedures or an intervention “package” (see Table 1) (i.e., Esveldt-Dawson et al., 1982; Gosschalk, 2004; Moffitt et al., 2003). In each of these 8 studies, a single participant was targeted in the intervention ($N = 1$), and across studies all youth showed improvements in school or classroom attendance relative to baseline. Additionally 5 of the 8 studies assessed other child behaviors (e.g., anxiety, depression, anger) using behavioral

observations or questionnaires completed by the parent, child, or both. Findings showed improvement on these additional child behaviors relative to baseline in all cases and for each type of outcome (see Table 1). Lastly, all experimental single-case studies reported long-term outcome data showing that intervention gains were maintained. Altogether, these 8 studies showed that behavioral and cognitive strategies, whether implemented as a single component or as an intervention package, can effectively reduce symptoms associated with school refusal and increase school attendance. It is noteworthy, however, that follow-up periods in these studies were short (i.e., 5 to 12 months), so further data are necessary before firm conclusions can be drawn about the robustness of these intervention procedures for improving school attendance.

Most of the 7 group-design studies included for review in this article tested a combination of procedures or an intervention "package" that included behavioral and cognitive strategies (Berg and Fielding [1978] and Blagg and Yule [1984] also reported on the effects of hospitalization, which included schooling, psychotherapy, and use of tranquilizers). Briefly, behavioral strategies across the interventions included in-vivo exposures to feared stimuli or situations related to school, relaxation training, and contingent reinforcement for school attendance; cognitive strategies included recognizing and clarifying distorted cognitions and attributions and devising coping plans. Across these studies, youth showed improvements in school or classroom attendance relative to pretest scores. Additionally, questionnaire data reported by the parent, child, or both indicated improvements in other areas (e.g., anxiety, depression, externalizing problems, and self-efficacy for handling school situations). Lastly, follow-up data showed that intervention gains were generally maintained, although it is important to note that only 2 studies had follow-ups that extended to 12 and 24 months, while the remaining 4 studies had follow-ups ranging from 2 weeks to 6 months. In essence, these 7 studies confirmed that behavioral and cognitive strategies can reduce school refusal and related symptoms, at least at the immediate posttest and short-term follow-up.

Two additional questions addressed by the body of research reviewed in this article were (1) whether behavioral and cognitive strategies, particularly individual cognitive behavioral therapy (ICBT), are more efficacious than a psychological "placebo" (i.e., Education Support) and (2) whether behavioral and cognitive strategies are more efficacious in reducing symptoms and increasing attendance rates under certain conditions (e.g., when parents and teachers are involved in the intervention). As shown in Table 2, in their examination of whether ICBT is more efficacious than a psychological "placebo," Last et al. (1998) found that youth in both conditions showed statistically significant improvements and that there were no significant effect differences between ICBT and the "placebo" of Education Support (ES), which provided psychoeducation as well as supportive counseling. This unexpected finding may have resulted because ES possibly led participants to engage in self-directed exposures to aversive school-based stimuli.

With regard to the question of efficacy under certain conditions, the studies of Kearney and Silverman (1999), Heyne et al. (2002), Berg and Fielding (1978), and Blagg and Yule (1984) provide some answers. Kearney and Silverman found that "prescriptive interventions" that target the function of the child's school refusal behavior (e.g., avoidance of school-based stimuli that provoke negative affect) were superior to those that did not. As shown in Table 2, Heyne et al. found that ICBT was "boosted" by involving parents and teachers in the intervention, although this was evident only in terms of school attendance, with the "boost" dissipating 2 weeks following completion of the intervention. The other two studies (Berg & Fielding and Blagg & Yule), also shown in Table 2, found no evidence that behavioral and cognitive strategies can be made significantly more efficacious by extending the intervention time from 3 to 6 months or by hospitalization.

Effect Sizes

To examine change as indexed by effect sizes, research results per study were cumulated across measures. Effect sizes for the experimental single-case design studies were not calculated, since each study was comprised of one participant. (Also, none of the studies used equivalent intervention procedures, so data from them could not be cumulated across studies.) Effect sizes for the group-design studies were calculated, but only for those studies that included pretest and posttest data. Two types of effect sizes were calculated. First, we focused on effect sizes corresponding to school attendance rates. Second, we considered the d-value effect size (*d*) as a standardized index of the mean intervention-related improvement in continuous outcome measures (e.g., anxiety, depression). To estimate an effect size, we calculated the difference in the outcome measures between pretest and posttest for the control and experimental conditions separately. The difference between these two differences was divided by the largest standard deviation (*SD*) (across the four *SD*s) to obtain a conservative index of treatment effect (Lipsey & Wilson, 2001).

Effect sizes for efficacy indexed as the percentage of school attendance at posttest were estimated for the four studies that reported posttest school attendance data (i.e., Heyne et al. 2002; Kearney & Silverman, 1999; King et al., 1998; Last et al., 1998). At posttest, youth were attending school about 75% of the time (p-hat = .75) (their average school attendance before treatment was 30%); however, intervention effects ranged from 47% to 100% school attendance. Results from the calculation of effect sizes for continuous variables (i.e., symptom measures) are presented in Table 3. King et al. (1998) compared ICBT that included Parent and Teacher Training (PTT) with a waitlist control condition. PTT consisted of basic training for parents and teachers in child behavior management strategies (e.g., planning the process for escorting the child to school, administering positive reinforcement for coping behavior and attendance), as well as cognitive therapy to help parents manage their own anxiety and understand their role in affecting change in their child's behavior. The comparison between ICBT with PTT and the waitlist yielded a statistically significant positive effect for ICBT with PTT ($d = .93$), suggesting that cognitive behavioral strategies can effectively reduce symptoms associated with school refusal. However, treatment effects ranged from .20 to 1.66 and thus further research is needed to identify potential moderators of treatment response. As noted above, Last et al. found no differences between ICBT and ES, and youth in both conditions showed significant improvements. For Last et al., the effect size comparing the two conditions was small and nonsignificant ($d = -.07$).

Heyne et al. (2002) examined the relative efficacy of ICBT with PTT by comparing an ICBT + PTT condition with a PTT condition and also with an ICBT condition. They found that youth improved significantly across all three conditions, and an examination of effect sizes showed that ICBT with PTT had a lesser effect than PTT ($d = -.26$, $SD = .47$) and a greater effect than ICBT ($d = .19$, $SD = .46$), although these differences did not reach statistical significance. This result is interesting because it suggests that PTT may be more efficacious than what is typically considered the standard treatment (i.e., ICBT). Kearney and Silverman's (1999) examination of ICBT entailed comparing a prescriptive ICBT targeting the function of the child's school refusal behavior with a nonprescriptive ICBT program. In this study, the advantage of the prescriptive over the nonprescriptive approach was "large" ($d = 4.64$). However, treatment effects ranged from −2.33 to 11.62, with effects being greater on some domains (e.g., anxiety) than others (e.g., depression), highlighting again that further research is necessary to better understand behavior change in the treatment of youth with school refusal behavior.

The two other group-design studies included in the review (Berg & Fielding, 1978; Blagg & Yule, 1984) reported on youth who had received hospitalization for school refusal behavior. However, only Blagg and Yule reported data that allowed a calculation of effect sizes,

which yielded a small and nonsignificant effect size (d = .03) in favor of behavioral treatment compared with hospitalization (youth improved significantly in both conditions). Because hospitalization requires more resources, it could be contended that behavioral treatment should be a first line of intervention prior to hospitalization; however, it is important to recognize that additional efficacy and cost-effectiveness data are needed before offering any recommendations.

Overall, it is evident that the field has made progress in important ways to secure evidence-based interventions for school refusal behavior. Data from the studies reviewed in this article showed that behavioral and cognitive strategies can effectively reduce symptoms associated with school refusal and increase school attendance (e.g., Hagopian & Slifer, 1993; King et al., 1998). However, it is less clear whether and how interventions can be made more efficacious for targeting school refusal behavior. Additional studies are certainly needed in this area. One potential avenue advocated by Kearney and Silverman (1990; 1999) is to focus on targeting the function of the child's school refusal behavior. Another avenue is to target the child's behavior vis-à-vis training the parent and teacher, as done by Heyne et al. (2002). As evidence continues to accumulate, the field will find itself in a better place to identify which interventions are most efficacious at reducing school refusal and its deleterious consequences, how these interventions can be refined to maximize their public health impact, and which children and adolescents are most likely to benefit.

Evaluative Conclusions

Based on this review of 8 experimental single-case design studies and 7 group-design studies, behavioral strategies alone and behavioral strategies in combination with cognitive strategies seem promising for reducing school refusal behavior. In both experimental single-case and group-design studies, behavioral and cognitive-behavioral strategies produced significant improvements in school attendance and youths' symptom levels (e.g., anxiety, fear, depression, disruptive behavior problems). These positive findings were consistent with this article's examination of effect sizes using data from five of the 7 group-design studies. The main effect-size findings were twofold: (1) school attendance and youths'symptom levels can be improved significantly with existing treatments, although there is room for improving efficacy; (2) positive change in school refusal behavior can be achieved when the child and/or the parents and teachers are trained to manage the behavior.

However, evidence is lacking for the superiority of delivering a child-focused intervention versus an intervention that involves parent and teacher training. The effect-size findings presented in this article should be viewed with caution due to significant variability. While this variability might be due to the strategy used for cumulating these data, it also might be the case that intervention effects are moderated in important ways. Thus, a critical next step is the examination of moderators of child behavior change. For example, it might be the case that youth who have difficulty making friends have worse outcomes with respect to attending or staying in school than do their more socially skilled counterparts. Consequently, answering questions about the conditions under which interventions are least or most efficacious (e.g. when youth are more/less socially skilled) is an important direction for future research.

Another critical next step is examining factors that mediate change in school refusal behavior interventions. For example, it might be the case that increases in youths' perceived self-efficacy for handling school situations (e.g., academic stressors) over the course of the intervention mediate improvements in school attendance. If so, an important component of training community providers (e.g., school counselors, social workers) may be to teach them to target this mediator (i.e., perceived self-efficacy for handing school situations) rather than

to implement a specific intervention program. Knowledge of mediators could be key for exporting evidence-based school refusal behavior interventions from research settings to community settings and into the hands of service providers.

Despite the progress that has been made in developing and testing interventions for school refusal behavior, research evidence is largely based on samples of youth who met diagnostic criteria for mental health problems. As found in several studies (e.g., Berg et al., 1993; Egger, Costello, & Angold, 2003), significant proportions of school refusers do not meet criteria for a diagnosis at all. Because these youth are underrepresented in the literature, there is little empirical evidence showing whether school refusal behaviors can be effectively reduced in these youth. Consequently, intervention studies with this segment of school refusers also are critical. Another underrepresented group is youth who refuse to attend school in order to pursue tangible reinforcers outside school (e.g., staying home to watch television, to go to the mall, or to work). One reason for this underrepresentation is that some of those youth may be labeled “truant” and thus are seen as deviant and deserving of punishment rather than social services (Lyon & Cotler, 2007). While it might be the case that youth who refuse to attend school in order to pursue tangible outside reinforcers require different interventions (rather than the ones evaluated in the studies reviewed), this question remains an empirical one and thus a future research objective.

In summary, progress has been made to secure evidence-based psychosocial interventions for school refusal behavior, although it is limited to youth who present with mental health problems. As such, a great deal of work remains to be conducted and various avenues for future research exist. In light of the generally positive findings revealed by the studies reviewed in this article, interventionists (e.g., school counselors, social workers) should consider training in the implementation of behavioral and cognitive strategies (e.g., graduated exposure, contingent reinforcement). Finally, it seems critical that policymakers work to augment funding to advance the development and evaluation of school refusal behavior interventions. This is particularly important in the contexts of the supplemental services mandated by the *No Child Left Behind Act* of 2001 (Public Law 107–110) to promote school engagement and reentry as well as to prevent school dropout.

References

Achenbach, TM. Manual for the Child Behavior Checklist/4–18 and 1991 Profile. Burlington: University of Vermont, Department of Psychiatry; 1991a.

Achenbach, TM. Manual for the Teacher’s Report Form and 1991 Profile. Burlington: University of Vermont, Department of Psychiatry; 1991b.

Alexander KL, Entwisle DR, Kabbani NS. The dropout process in life course perspective: Early risk factors at home and school. Teachers College Record. 2001; 103:760–822.

American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 4. Washington, DC: Author; 1994.

Barlow, DH.; Hersen, M. Single-case experimental designs: Strategies for studying behavior change. New York: Pergamon Press; 1976.

Berg I. A Self-Administered Dependency Questionniare (S.A.D.Q.) for use with the mothers of schoolchildren. British Journal of Psychiatry. 1974; 124:1–9.

Berg I, Butler A, Franklin J, Hayes H, Lucas C, Sims R. DSM-III-R disorders, social factors and management of school attendance problems in the normal population. Journal of Child Psychology and Psychiatry. 1993; 34:1187–1203. [PubMed: 8245141]

Berg I, Fielding D. An evaluation of hospital in-patient treatment in adolescent school phobia. British Journal of Psychiatry. 1978; 132:500–505. [PubMed: 656715]

Berg, I.; Nursten, J., editors. Unwillingly to school. 4. London, England: Gaskell/Royal College of Psychiatrists; 1996.

Berg I, Nichols K, Pritchard C. School phobia: Its classification and relationship to dependency. Journal of Child Psychology and Psychiatry. 1969; 10(2):123–141. [PubMed: 5368365]

Bernstein GA, Borchardt CM. School refusal: Family constellation and family functioning. Journal of Anxiety Disorders. 1996; 10:1–19.

Blagg NR, Yule W. The behavioural treatment of school refusal: A comparative study. Behaviour Research and Therapy. 1984; 22:119–127. [PubMed: 6712554]

Broadwin IT. A contribution to the study of truancy. American Journal of Orthopsychiatry. 1932; 2:253–259.

Brown RE, Copeland RE, Hall RV. School phobia: Effects of behavior modification treatment applied by an elementary school principal. Child Study Journal. 1974; 4:125–133.

Burke AE, Silverman WK. The prescriptive treatment of school refusal. Clinical Psychology Review. 1987; 7:353–362.

Canino IA, Gould MS, Prupis S, Shaffer D. A comparison of symptoms and diagnoses in hispanic and black children in an outpatient mental health clinic. Journal of the American Academy of Child Psychiatry. 1986; 25:254–259. [PubMed: 3700914]

Chávez RC, Belkin LD, Hornback JG, Adams K. Dropping out of school: Issues affecting culturally, ethnically and linguistically distinct students groups. The Journal of Educational Issues of Language Minority Students. 1991; 8:1–21.

Chiland, C.; Gerard, YJ. Why children reject school: Views from seven countries. New Haven CT: Yale University Press; 1990.

Chorpita BF, Albano AM, Heimberg RG, Barlow DH. A systematic replication of the prescriptive treatment of school refusal behavior in a single subject. Journal of Behavior Therapy and Experimental Psychiatry. 1996; 27(3):281–290. [PubMed: 8959430]

Chorpita BF, Yim L, Moffitt C, Umemoto LA, Francis SE. Assessment of symptoms of DSM-IV anxiety and depression in children: A revised child anxiety and depression scale. Behaviour Research and Therapy. 2000; 38:835–855. [PubMed: 10937431]

Egger HL, Costello EJ, Angold A. School refusal and psychiatric disorders: A community study. Journal of the American Academy of Child and Adolescent Psychiatry. 2003; 42:797–807. [PubMed: 12819439]

Eysenck, SBG. Manual of the Junior Eysenck Personality Inventory. London: University of London Press; 1965.

Eysenck, HJ.; Eysenck, SBG. Manual of the Eysenck Personality Inventory. London: Hodder & Stoughton; 1975.

Esveldt-Dawson K. Treatment of phobias in a hospitalized child. Journal of Behavior Therapy and Experimental Psychiatry. 1982; 13(1):77–83. [PubMed: 7068901]

Gosschalk PO. Behavioral treatment of acute onset school refusal in a 5-year old girl with separation anxiety disorder. Education & Treatment of Children. 2004; 27(2):150–160.

Gullone E, King NJ. Psychometric evaluation of a revised fear survey schedule for children and adolescents. Journal of Child Psychology and Psychiatry. 1992; 33:987–998. [PubMed: 1400694]

Hagopian LP, Slifer KJ. Treatment of separation anxiety disorder with graduated exposure and reinforcement targeting school attendance: A controlled case study. Journal of Anxiety Disorders. 1993; 7:271–280.

Heyne D, King NJ, Tonge BJ, Rollings S, Young D, Pritchard M, et al. Evaluation of child therapy and caregiver training in the treatment of school refusal. Journal of the American Academy of Child and Adolescent Psychiatry. 2002; 41:687–695. [PubMed: 12049443]

Heyne D, King N, Tonge B, Rollings S, Pritchard M, Young D, et al. The self-efficacy questionnaire for school situations: Development and psychometric evaluation. Behaviour Change Special Issue: School Refusal. 1998; 15:31–40.

Houlihan DD, Jones RN. Treatment of a boy's school phobia with in vivo systematic desensitization. Professional School Psychology. 1989; 4:285–293.

Kearney CA. Forms and functions of school refusal behavior in youth: An empirical analysis of absenteeism severity. Journal of Child Psychology and Psychiatry. 2007; 48:53–61. [PubMed: 17244270]

Kearney CA, Albano AM. The functional profiles of school refusal behavior: Diagnostic aspects. Behavior Modification. 2004; 28:147–161. [PubMed: 14710711]

Kearney CA, Silverman WK. A preliminary analysis of a functional model of assessment and treatment for school refusal behavior. Behavior Modification Special Issue: Child Abuse and Neglect. 1990; 14:340–366.

Kearney CA, Silverman WK. Measuring the function of school refusal behavior: The school assessment scale. Journal of Clinical Child Psychology. 1993; 22:85–96.

Kearney CA, Silverman WK. The evolution and reconciliation of taxonomic strategies for school refusal behavior. Clinical Psychology: Science and Practice. 1996; 3:339–354.

Kearney CA, Silverman WK. Functionally based prescriptive and nonprescriptive treatment for children and adolescents with school refusal behavior. Behavior Therapy. 1999; 30:673–695.

King, NJ.; Ollendick, TH.; Tonge, BJ. School refusal: Assessment and treatment. Needham Heights, MA, US: Allyn & Bacon; 1995.

King NJ, Tonge BJ, Heyne D, Pritchard M, Rollings S, Young D, et al. Cognitive-behavioral treatment of school-refusing children: A controlled evaluation. Journal of the American Academy of Child and Adolescent Psychiatry. 1998; 37:395–403. [PubMed: 9549960]

King NJ, Tonge BJ, Heyne D, Turner S, Pritchard M, Young D, et al. Cognitive-behavioural treatment of school-refusing children: Maintenance of improvement at 3- to 5-year follow-up. Scandinavian Journal of Behaviour Therapy. 2001; 30:85–89.

Kolko DJ, Ayllon T, Torrence C. Positive practice routines in overcoming resistance to the treatment of school phobia: A case study with follow-up. Journal of Behavior Therapy and Experimental Psychiatry. 1987; 18:249–257. [PubMed: 3667954]

Kovacs, M. Children's depression inventory manual. Los Angeles: Western Psychological Services; 1992.

Lamdin DJ. Evidence of student attendance as an independent variable in education production functions. Journal of Educational Research. 1996; 89:155–162.

Last CG, Hansen C, Franco N. Cognitive-behavioral treatment of school phobia. Journal of the American Academy of Child and Adolescent Psychiatry. 1998; 37:404–411. [PubMed: 9549961]

Lipsey, MW.; Wilson, DB. Practical Meta-analysis. Thousand Oaks, CA: Sage Publications; 2001.

Lyon AR, Cotler S. Toward reduced bias and increased utility in the assessment of school refusal behavior: The case for diverse samples and evaluations of context. Psychology in the Schools. 2007; 44:551–565.

Moffitt CE, Chorpita BF, Fernandez SN. Intensive cognitive-behavioral treatment of school refusal behavior. Cognitive and Behavioral Practice. 2003; 10:51–60.

Naglieri, J.; LeBuffe, P.; Pfeiffer, S. Devereux behavior rating scales – school form: Manual. San Antonio, Texas: The Psychological Corporation; 1993.

Ollendick TH. Reliability and validity of the Fear Survey Schedule for Children-Revised (FSSC-R). Behaviour Research and Therapy. 1983; 21:685–692. [PubMed: 6661153]

Place M, Hulsmeier J, Davis S, Taylor E. The coping mechanisms of children with school refusal. Journal of Research in Special Educational Needs. 2002; 2 [np].

Public Law 107–110. No Child Left Behind Act of 2001. Retrieved December 14, 2007, from http://www.ed.gov/policy/elsec/leg/esea02/107-110.pdf

Reynolds CR, Richmond BO. What I Think and Feel: A revised measure of children's manifest anxiety. Journal of Abnormal Child Psychology. 1978; 6:271–280. [PubMed: 670592]

Rubin DB. Estimating causal effects of treatments in randomized and nonrandomized studies. Journal of Educational Psychology. 1974; 66:688–701.

Rumberger RW, Ghatak R, Poulos G, Ritter PL. Family influences on dropout behavior in one California high school. Sociology of Education. 1990; 63:283–299.

Silverman WK, Kurtines WM, Ginsburg GS, Weems CF, Rabian B, Serafini LT. Contingency management, self-control, and education support in the treatment of childhood phobic disorders: A randomized clinical trial. Journal of Consulting and Clinical Psychology. 1999; 67:675–687. [PubMed: 10535234]

Silverman, WK.; Pina, A. Psychosocial treatments for phobic and *anxiety* disorders in youth. Handbook of evidence-based therapies for children and adolescents: Bridging science and practice. In: Steele, Ric G.; Elkin, T David; Roberts, Michael C., editors. Issues in clinical child psychology. New York, NY, US: Springer Science & Business Media; 2007. p. 65-82.

Spielberger, C. Manual for State-Trait Anxiety Inventory for Children. Palo Alto, CA: Consulting Psychologists Press; 1973.

Table 1

Single Case Design Studies Evaluating Psychosocial Interventions for School Refusal Behavior in Youth

Study	Sample Characteristics	Design/Conditions	Outcome at Immediate Posttest	Long Term Outcome
Brown et al. (1974).	11-year-old boy. Problem defined as school absenteeism (51 days absent in 4th and 5th grade).	Baseline of time spent in hall or library and time spent in classroom. Reinforcement for 22 days contingent on spending time in hall or library and then for time in classroom.	Relative to baseline, time in hall and library improved (time in classroom did not). When targeted, time in classroom improved.	At 45- and 55-week follow-ups, average time in the classroom was above baseline.
Esveldt-Dawson et al. (1982).	12-year-old Caucasian inpatient girl with DSM- III SOP. Problem defined as avoidance of school.	Baseline of school phobia behaviors, phobia of unfamiliar males and of appropriate behaviors. The 10- to 15-week intervention entailed 10 role-play situations with therapist modeling the behavior and child acting the situation with feedback and reinforcement.	Relative to baseline, school phobia behaviors decreased (stiffness, nervous mannerisms, anxiety) and appropriate behaviors increased (eye contact, affect, movement, social skills).	Gains were maintained relative to baseline 7 and 21 weeks after discharge. Moreover, parents reported the child was attending school regularly.
Houlihan & Jones (1989).	13-year-old boy with DSM-III-R OAD and Dysthymia. Problem defined as school nonattendance (159 days absent in 6th grade).	Baseline of number of hours child attended school. The 27-week intervention started with a discussion of positive aspects of school followed by graduated in vivo exposures to homeroom class, to eating in the cafeteria, and then to the child's other classes.	Relative to baseline, hours of school attendance increased. There also was improvement on academics and depressive symptoms, but the child still met criteria for the diagnoses.	The intervention was discontinued at the end of the school year. Over the next school year, school attendance and academic achievement remained above baseline levels.
Hagopian & Slifer (1993).	6-year-9-month-old Caucasian girl with DSM-III-R SAD. Problem defined as school avoidance after holiday break.	Concurrent baseline of time in class and in Girl Scout meetings without mother. The 10- week intervention used exposures to separation from mother with contingent reinforcement. Minimal attention was provided to the child's anxiety at home and her crying. A similar schedule was used to increase time sleeping in own bed.	Relative to baseline, time in class increased and so did time in Girl Scout meetings. There were improvements on RCMAS and CDI. Depressed and somatic complaints returned to the normal range and so did CBCL social withdrawal, hyperactive, and aggressive behaviors. SAD was not present.	At the 2- and 9-month follow-ups all gains were maintained.
Chorpita et al. (1996).	10-year-2-month-old Caucasian girl with DSM-III-R SAD and SOP. Problem defined as crying, poor appetite, restless sleep, and enduring school with marked distress.	Baseline of somatic complaints, anger and tantrums, tears, and other complaints. The 5-session intervention instructed parents to ignore the problem behaviors then a reinforcement schedule for behaviors functionally equivalent to the target problem behaviors was implemented. In-session role- play training was delivered to the mother.	Relative to baseline, somatic complaints, anger and tantrums, and crying decreased to zero frequency and generally remained at reduced levels. Other complaints had decreased to zero after crying was targeted.	At the 2-week follow-up, the frequency of targeted (and the nontargeted) behaviors was maintained at zero. The child no longer met criteria for SAD or SOP. At the 24-month follow-up, gains were maintained.
Gosschalk (2004)	5-year-4-month-old Australian girl with DSM-IV-TR SAD. Problem defined as crying and refusal to attend preschool.	Baseline of school attendance. The 7-week intervention used relaxation for sleep and during daytime. A routine for separation at the classroom door and extinction of crying/protests were used. Reinforcement of time away from mother at home.	Relative to baseline, the percentage of total numbers of pre-school attendance days and separation from mother improved. There also was improvement on mother-rated DSF. SAD was not present.	At the 4- and 12-month follow- up, all gains were maintained.
Kolko et al. (1987)	6-year-old Caucasian girl. Problem defined as crying and begging not to be taken to school.	Baseline data were not reported. The 8-week intervention used exposures to the classroom with adult. Next, a 5-week positive practice routine, in	Exposure with adult resulted in no improvements. Positive practice resulted in improvements on class	At the 1- and 12-month follow- up, all gains were maintained.

Study	Sample Characteristics	Design/Conditions	Outcome at Immediate Posttest	Long Term Outcome
		which the child worked in the principal's office, was implemented.	attendance without adult, social involvement, and academic grades.	
Moffitt et al. (2003).	12-year-old Hawaiian and Caucasian girl with DSM-IV MDD, SOP, and SAD. Problem defined as absences, tantrums and escaping school.	Baseline of class attended. University clinic-based and school-based ICBT (psychoeducation, graduated exposures, contingency management, cognitive restructuring, modeling, and role-playing) with problem solving.	Relative to baseline, ICBT with problem solving increased the percentage of classes attended.	At the 1-month follow-up, the child was diagnosis free and at the 5- and 8-month follow-ups, CDI, RCMAS, and RCADS were not in the clinical range. CBCL was in the normal range at the 8-month follow-up.

DSM = Diagnostic Statistical Manual for Mental Disorders; SOP = social phobia; OAD = overanxious disorder; GPA = grade point average; SAD = separation anxiety disorder; RCMAS=Revised Children's Manifest Anxiety Scale (Reynolds & Richmond, 1978); CDI = Child Depression Inventory (Kovacs, 1992); CBCL = Child Behavior Checklist (Achenbach, 1991a); DSF = Devereux Behavior Rating Scales School Form (Naglieri, LeBufee, & Pfeiffer, 1993); MDD = major depressive disorder; ICBT = individual cognitive behavior therapy; RCADS = Revised Children's Anxiety and Depression Scale (Chorpita, Yim, Moffitt, Umemoto, & Francis, 2000).

Table 2

Group Design Studies Evaluating Psychosocial Interventions for School Refusal Behavior in Youth

Study	Sample Characteristics	Conditions	Outcome at Immediate Posttest	Follow-up
Berg & Fielding (1978).	*N* = 32, about 13 years old, 16 girls, (British) with school phobia. Problem defined using Berg, Nichols, & Pritchard's (1969) criteria of difficulty attending school, emotional upset, staying home from school with parents knowing, no antisocial disorders.	Randomized to 3-month (*n*=16) or 6-month (*n*=16) supportive psychotherapy, social skills training, milieu therapy, and family therapy delivered at a hospital (in-patient psychiatric unit).	At posttest, there were no significant group differences on Junior EPI, Mother EPI, actual SADQ, or 3 subscales of the preferred SADQ (affection, communication, and travel). Mothers of children in the 3-month condition reported higher ratings on the preferred SADQ - assistance subscale.	At the 6-, 12-, and 24- month follow-ups, the rates of "well or much improved" based on clinicians' report were about 45%, 50%, and 55% respectively.
Blagg & Yule (1984).	*N* = 66, ages 11 to 16 years, 33 girls (British). Problem defined using Berg et al.'s (1969) criteria.	Behavioral treatment (BTA, *n*=30), hospitalization (HU, *n*=16), home tuition and psychotherapy (HT, *n*=20). Nonrandomized. Duration in weeks: BTA = 2.53, HU = 45.3, HT = 72.1.	Posttest data were available from the BTA and the HU conditions. Both conditions improved on EPQ extraversion and neuroticism, with no differences between the two conditions. HU improved significantly on self-esteem but BTA did not. There were no significant improvements on EPQ psychoticism or lie scale scores.	At 1-year follow-up, 93.3% in BTA, 37.5% in HU, and 10% in HT returned to school full time (BTA > HU; BTA > HT). No questionnaire data were reported.
Last et al. (1998).	*N* = 56, ages 6 to 17 years, 28 girls, Caucasian (*n*=51), African American (*n*=2), Latino (*n*=2). DSM-III-R SP or SOP (*n*=23), SAD (*n*=13), AVD (*n*=2), OAD (*n*=2), panic (*n*=1). Problem defined as anxiety about attending school and school avoidance.	Randomized to ICBT (*n*=32) or Education Support (*n*=24). Delivered at a university-based clinic. Duration: 12/12 sessions/ weeks.	From pretest to posttest, ICBT and Education Support improved on mean percentage of hours spent in class, STAIC and CDI with no differences between the two conditions.	At 4-week follow-up, gains were maintained with no differences between conditions on attendance. STAIC and CDI data were not reported.
Kearney & Silverman (1999).	*N* = 8, mean age = 11.2 years, 3 girls, Caucasian (*n*=6), African American (*n*=1), Caucasian-Hispanic (*n*=1) with DSM-IV SP (*n*=1), GAD (*n*=3), SAD (*n*=2), no diagnosis (*n*=1), SOP (*n*=1). Problem defined as child-motivated refusal to attend or stay in school.	Prescriptive ICBT (*n*=4) or Nonprescriptive ICBT (*n*=4). Delivered at a university-based research clinic. Nonrandomized. Duration: Prescriptive = 3–10 sessions, Nonprescriptive = 5–7 sessions.	From pretest to posttest, there were improvements in percentage of time out of school, FSSC-R, FSSC-R school items, RCMAS, CDI, PHSCS, child/parent daily anxiety ratings, child/parent daily depression ratings, CBCL-I/E, and TRF-I/E.	At the 6-month follow-up, gains were maintained across all measures, except for parent daily anxiety ratings, parent daily depression ratings, and percentage of time out of school; but these remained below baseline levels.
King et al. (1998).	*N* = 34, ages 5 to 15 years, 16 girls (Australian). DSM-III-R SAD (*n*=8), adjustment disorder (*n*=7), OAD (*n*=5), SP (*n*=3), SOP (*n*=2). Problem defined using Berg et al.'s criteria.	Randomized to ICBT with Parent and Teacher Training (ICBT + PTT, *n*=17) or Waitlist (*n*=17). Delivered at a school refusal specialty clinic. Duration: 6/4 sessions/weeks.	From pretest to posttest, CBT + PTT improved on number of full days present at school, SEQSS, RCMAS, FSSC-II, CDI, CBCL-I/E, and TRF-I/E compared with the waitlist.	At 3-month follow-up, gains were maintained. King et al. (2001) reported 3- to 5-year follow-up data and gains on attendance were maintained.
Heyne et al. (2002).	*N* = 65, ages 7 to 14 years, 28 girls (Australian) DSM-IV Adjustment disorder (*n*=24), SAD (*n*=6), SOP (*n*=6), Anxiety disorder NOS (*n*=9). Problem defined using Berg et al.'s criteria.	Randomized to ICBT (*n*=21), ICBT + PTT (*n*=20), PTT (*n*=20) delivered at a medical center Duration: 8/16 session/weeks.	From pretest to posttest, ICBT + PTT improved SEQSS, FSSC-II, RCMAS, CDI, and Fear Thermometer ratings tied to "Going to school the next day," as did the other two intervention conditions. ICBT + PTT and PTT improved school attendance more than ICBT.	At 2-week follow-up, gains were maintained across measures with no differences among conditions, not even in attendance.

EPI=Esyenck Personality Inventory (Esyenck, 1965); SADQ=Self Administered Dependency Questionnaire (Berg, 1974); EPQ=Esyenck Personality Questionnaire (Esyenck & Esyenck, 1975); SP=specific phobia; SOP=social phobia; SAD=separation anxiety disorder; AVD=avoidant disorder; OAD=overanxious disorder; ICBT=individual cognitive behavior therapy; STAIC-T=State Trait Anxiety Inventory for Children-Trait (Spielberger, 1973); CDI=Child Depression Inventory (Kovacs, 1992); GAD=generalized anxiety disorder; FSSC-R=Fear Survey Schedule for Children-Revised (Ollendick, 1983); RCMAS=Revised Children's Manifest Anxiety Scale (Reynolds & Richmond, 1978); FSSC-II=Fear Survey Schedule for Children-Second Revision (Gullone & King, 1992); CBCL=Child Behavior

Checklist (Achenbach, 1991a); SRAS=School Refusal Assessment scale (Kearney & Silverman, 1993); TRF-I/E=Teacher Report Form (Achenbach, 1991b); I/E = Internalizing/Externalizing; NOS= not otherwise specified; SEQSS=Self-Efficacy Questionnaire for School Situations (Heyne et al., 1998).

Table 3

Effect sizes for the mean-related pretest to posttest improvement in each group design study based on continuous measures

Study	K	N	d	SDd	SESD	ResSd	%VarSE	95% C.I.
Berg & Fielding (1978). Hospitalization: Long Stay (6-month) vs. Short Stay (3-month)	-	-	-	-	-	-	-	-
Blagg & Yule (1984). Behavioral Treatment vs. Hospitalization	3	86	.03	.3197	.2934	.1269	84.24	−.22 to .28
Last et al. (1998). ICBT vs. Education Support	3	141	−.07	0.2971	.2379	.1780	64.10	−0.42 to 0.28
Kearney & Silverman (1999). Prescriptive ICBT vs. Nonprescriptive ICBT	4	32	4.64	4.6484	2.9895	3.5596	41.36	−2.33 to 11.62
King et al. (1998). ICBT with PTT vs. Waitlist	8	260	.93	.4752	.2969	.3710	39.03	.20 to 1.66
Heyne et al. (2002). ICBT with PTT vs. ICBT	16	656	.19	.4595	.2450	.3887	28.43	−0.57 to 0.95
Heyne et al. (2002). ICBT with PTT vs. PTT	16	640	−.26	0.4652	.2463	.3946	25.04	−1.03 to 0.52
Heyne et al. (2002). ICBT vs. PTT	16	656	−.40	.3698	.2449	.2772	43.83	−.94 to 0.14

ICBT = individual cognitive behavioral treatment, PTT = parent and teacher training, K = the number of measures that contributed an effect size. N = total number of observations across the K samples. – Effect size was not calculated because pretest data were not reported