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Recent Perspectives Concerning School Refusal Behavior

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Abstract

A review of the literature regarding school refusal was conducted. It was found that the term School Refusal Behavior has gone through many changes. These changes encompass nomenclature, etiology, and treatment. The names used to describe the behavior of school refusal have ranged from truancy in the 1930s to School Refusal Behavior in the 1990s. Other terms have been applied, and are still currently applied today, such as Social Phobia. Currently, a functional definition of school refusal is most often used, and syncs up with recommended treatments depending on the function the refusal represents.

Keywords: school refusal behavior; truancy; intervention; school phobia; social phobia

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Introduction

School refusal behavior (SRB) has undergone several titular and definitional transformations since it was first defined as truancy in 1932 by Broadwin. Broadwin (1932) defined truancy in two parts. The first part consisted of a dictionary definition which states that truancy is an "...absense from school without proper leave" (p. 253). The second half of Broadwin's definition is psychodynamic in nature and relies on the child's development, specifically, how he or she has dealt with each psychosexual stage. Broadwin claimed that truancy could have epidemiological characteristics that included boredom wrought out of a difficulty in achieving or difficulty in being challenged, defiance, a means of gaining attention, an avoidance function, or a form of obsession. One problem with using truancy to describe SRB is that it could possibly be rooted in conduct disorder, which according to King, Ollendick, and Tonge (1995), does not reflect the avoidant nature inherent in many cases of SRB. As a result of its inability to differentiate between different presenting types of school refusal, terms other than truancy, such as school phobia, social phobia, and separation anxiety disorder have been suggested and used (Kearney & Silverman, 1990). These terms, plus many others, have all been criticized for being unable to reflect the heterogeneity of the problem of SRB (c.f. Hersov, 1990; Kearney & Silverman, 1990; King et al., 1995; Lee & Miltenberger, 1996). Throughout these definitional changes, many advances were made in the understanding of SRB. For

example, Coolidge et al. (1957) proposed a dichotomous classification system in which children with SRB would be defined as being of the neurotic or characterological subtypes. Those defined as neurotic had an acute onset and displayed symptoms common to anxiety, namely, clinging behaviors centered around the child's parent(s). Coolidge, Hahn, and Peck state that the neurotic group developed their school avoidance through an evaded *oedipal complex*, in which the child remains infantile and asexual. Characterological school refusers were seen as antisocial, and their problems appeared more gradually and were described as being born out of a fixation in the pregenital stage. Along with advances in differentiation between types of SRB, advances in defining onset of SRB were made as well. Kennedy (1965) defined two types of SRB onset. Type I was defined as SRB that displayed an acute onset, and was typified with an illness being reported during the first episode. Kennedy also states that these children have a tendency to achieve lower grades in school, and that their parents typically have a better communication style, than their Type II counterparts. Children were labeled as Type II when their SRB had a gradual onset and involved multiple episodes, in which reported illnesses occurred later in the absences from school. Kennedy describes these children as being high achievers in school. Kennedy notes that Type I SRB is correlated with better treatment outcomes than Type II, but that this difference may be due to factors already present in the individual (i.e., good family support, familial emphasis on school). Hersov (1990) notes that Type I is often seen more in younger children, whereas Type II is seen more in older children.

Different approaches to classification have also been proposed (Lee & Miltenberger, 1996). A diagnostic approach would capitalize on the DSM-IV-TR (American Psychological Association, 2002). Paige (1997) reports a paradigmatic approach to defining SRB based upon etiologies. For example, Psychoanalytic, Psychodynamic, and Behavioral paradigms are offered as etiological bases for treatment intervention. The latter of these three paradigms allows for the functional classification of SRB, which is based upon maintaining conditions (Lee & Miltenberger, 1996). It is these maintaining conditions that are the basis for the most widely accepted form of classification of SRB which was proposed by Kearney and Silverman (1990).

Kearney and Silverman identified four categories of school refusal behavior based upon the functional relationship between school avoidance and its etiology. These four cate-

gories are based upon anxiety, social situations, attention, and tangible reinforcers. These categories are labeled Category I, II, III, and IV, respectively.

Prevalence

The prevalence of SRB would seem difficult to assess, since the definition and requirements have changed substantially through the years. Kennedy (1965) put the prevalence of SRB at 1.7%. Nearly twenty years later, Granell de Aldaz et al. (1984) conducted a review of ten prevalence studies to conclude that 4.9% of the school-aged population could be classified as having SRB at some point. It is unclear if the difference in prevalence rates in these two studies are based on definitional styles or a change in social climate. Granell de Aldaz and colleagues added some weight to the change in definition argument for explaining the difference in prevalence rates when they conducted a prevalence study of SRB in Venezuelan children. When using a strict definition of SRB, only .4% of the children met the requirements for SRB. When a more encompassing definition of SRB was applied, the prevalence rate rose to 5.4%. The same sample was used for both prevalence rates, it was only the definition that changed. The data regarding differences of the prevalence of SRB between the sexes is mixed (c.f. King et al., 1995). That is, based upon the current literature, it is not entirely certain whether or not boys tend to refuse school more than girls.

When asked about cases of SRB in the last 12 months, 63 out of 300 psychologists in youth and family practices responded with information regarding the age of the client, the length of treatment, the reason for the SRB, and the method and success of treatment (Kearney & Beasley, 1994). It was found that 11.2% of clients with SRB were between the ages of 5 and 6, 31.5% between 7 and 9, 21.9% between 10 and 12, 20.0% between 13 and 15, and 15.2% were between the ages of 16 and 17.

Stickney and Miltenberger (1998) polled 288 schools in regards to the rate of school refusal across grades K-12. Between all thirteen grade levels, a prevalence rate of 1.7% was reported. The highest reported incidence of SRB was between ninth and twelfth grade, which was 4.5% of the sample population. Next was grades 7 through 12, which was 3.9%, 7 through 8, 2.3%, K through 6, 1.3%, and K through 8, 1.1%. It was also found that 49% of school refusers reported somatic complaints that were unaccompanied by any medical condition, while 30% reported somatic complaints that did have an accompanying medical condi-

tion. In regards to the reason for refusing, 13% reported depression or other affective difficulties, another 13% reported difficulties with separating from their caregiver, this was typically seen in K-6 and K-8 schools, and 27% avoided school to pursue more enjoyable activities.

Etiology

Etiological explanations of SRB have markedly changed throughout the years. Currently, there are several options available to explain SRB, indicating no resolution to the etiological debate. Paige (1997) offers three paradigmatic alternatives to the etiology of SRB. In the first paradigm, psychoanalytic theory, mother-child relationships are responsible for the emergence of SRB. In this view, repressed anxiety is expressed in the form of SRB that results from mutual dependency and hostility from the relationship. In the second view, psychodynamic, a dysfunctional relationship between the parent and the child is viewed as the key to treating SRB. The third, behavioral theory, focuses on positive and negative reinforcement as being the causal factor in SRB.

When asked why their clients choose to avoid school, 63 psychologists who deal with SRB reported that 26.1% avoid to stay at home with their caregiver (Kearney & Beasley, 1994). Those who avoid due to aversive social situations comprised 25% of the cases reported, difficulty with homework or school was reported as the reason for avoidance in 12.2% of the cases, aversive evaluations for 10%, fear of specific stimuli at school for10%, positive tangible rewards for 7.8%, and 8.9% reported other reasons as their motivating factor for avoiding school.

Diagnosis

Lee and Miltenberger (1996), in a review of the literature, purport that a diagnosis of social phobia, specific (school) phobia, separation anxiety disorder, or depression can be given to children who present with symptoms of SRB. Several suggestions are made as to how to properly diagnose each of these disorders. For interview diagnostic assessments, Lee and Miltenberger suggest either the Interview Schedule for Children or the Anxiety Disorders Interview Schedule for Children. Several valid and reliable assessment tools for assessing diagnostic classification have also been suggested (c.f. Lee & Miltenberger, 1996).

Kearney and Albano (2004) conducted a study to examine the primary diagnosis of 143 children aged 5-17 with SRB. It was discovered that the primary diagnosis for 22.4% of the children was separation anxiety disorder, 10.5% for generalized anxiety disorder, 8.4% for oppositional defiant disorder, 4.9% for major depression, 4.2% for specific phobia, 3.5% for social phobia, 2.8% for conduct disorder, and 43.3% had other diagnoses, or no diagnosis at all.

Different classifications have been presented that use behaviorism as its foundation. For example, Evans (2000) classifies SRB as one of three diagnoses; anxiety refusers, avoidance refusers, and malingering refusers. Anxious and avoidant refusal, according to Evans, is believed to be developed from classical conditioning. Evans explains that when the conditioned stimulus, for this example, separation, is paired with an unconditioned stimulus, school, the resulting conditioned response would be one of anxiety, which in turn would lead to school refusal. Malingering refusal is based instead upon operant conditioning. Either escaping school results in negative reinforcement, or the consequences of engaging in enjoyable activities outside of the school environment are positively reinforced.

Currently, the most widely used is a diagnostic criteria were set forth by Kearney and Silverman (1990). In their diagnoses, SRB is based upon a functional relationship in which maintaining conditions are examined to determine why the child is avoiding school. Kearney and Silverman have identified four categories of maintaining conditions.
Category I is comprised of children who refuse school due to fearfulness and anxiety, Category II is reserved for those who refuse based upon avoidance of a specific aversive social situation, Category III for individuals with separation difficulties or those who seek the attention of caregivers, and Category IV for children who avoid school for tangible reinforcement. Categories I and II are based upon negative reinforcement, while Categories III and IV are maintained by positive reinforcement. These functions serve as the basis for behavioral interventions that aim to cease the maintaining conditions. The behavioral interventions based upon these four categories have been shown to be effective in the reinstatement of the child back in to the school (c.f. Houlihan & Jones, 1989; Kearney & Silverman, 1990; Last et al., 1998; Stickney & Miltenberger, 1998).

Kearney and Albano (2004) looked at the functional profiles of 143 children with SRB. Results indicated that SRB derived from a desire to avoid negative affect producing

situations or to gain attention were characteristic of younger children with SRB. Older children were found to display SRB that was rooted in avoiding social situations that produced anxiety or discomfort, or to gain access to tangible rewards.

Comorbidity

Baker and Willis (1978) conducted a study that looked at the differences between 99 school phobic children who either had acute or chronic school refusal. Acute school refusal was assigned as a label to those children who had at least three years of school attendance without the presence of SRB followed by the presence of SRB, regardless of the length of the SRB. Chronic SRB is assigned to children who lack a three year period of SRB-free school attendance. It was discovered in this study that children with acute SRB tended to have more psychiatric problems that needed attention preceding the treatment of their SRB, and tended to be the youngest born when there were two or less siblings present. Chronic SRB children displayed more anxious and withdrawn characteristics than acute SRB children.

Bernstein and Garfinkel (1988) examined six patients with SRB and comorbid depression and anxiety and compared them to a control group consisting of five children with other psychiatric disorder than the ones in the experimental group. It was found that the experimental group had more first and second degree relatives with anxiety, depression, or a combination of anxiety and depression than did the control group. One problem with these results is that the SRB, much like the depression or anxiety, could be the result of parenting styles. It is unknown if SRB is somehow genetically linked or the result of parenting styles. Sommer and Nagel (1991) found in their study that truant children were less likely to live with both parents and were more likely to have more siblings than a non-truant control group. This brings in the question of whether comorbid disorders are derived through genetic or environmental means.

In a study that looked at the academic consequences of SRB, Sommer and Nagel (1991) recruited 25 truants and 25 age, gender, race, and socioeconomic status-matched non-truant children. It was discovered that 44% of the truant children were more likely to drop out of school, have lower grade point averages, and have other discipline problems at school than the non-truant group. Of those truants who did go on to graduate, they were found to be comparable to the control group.

Flakierska et al. (1988) examined 35 Swedish urban children aged seven to twelve with SRB with 35 age and sex-matched children without SRB in a 15 to 20-year follow-up study of children treated for SRB. Results indicated that the treated SRB group attended school just as often as the control group after successful treatment. The SRB group sought out more help of a psychiatric nature as adults, although it is unclear if exposure to psychological help as children had an effect on this aspect of the study. In terms of post-treatment criminal offenses, there were no differences between the control and experimental group.

One difficult thing to determine about the phenomenology of SRB, is whether disorders are comorbid, or merely the cause of the behavior. For example, Evans (2000) explains how different forms of SRB may be caused by different disorder, like social phobia, depression, or separation anxiety disorder. It could be said that these disorders may be comorbid with SRB, but it may be more likely that they are the cause.

Assessment

Kearney and Beasley (1994) found that 38.7% of psychologists who responded to their survey (n = 63) claimed to operate under a cognitive and/or behavioral paradigm, 25.8% oriented themselves under a family systems approach, 21% were psychodynamic, and 9.7% responded as being eclectic. Regardless of what is used, Nader et al. (1975) suggests that the first step to assessment is a physical examination. This is often first by default, because the first place a child usually ends up who has SRB is the physicians office. Kearney (2006a) outlines SRB for physicians, stressing a mulitdisciplanry approach to assessment and treatment. The next step in assessment will depend on whether or not a diagnostic or behavioral assessment is used.

Diagnostic

There are several diagnostic tools available to clinicians and researchers to use when dealing with SRB. A thorough analysis of every instrument would prove to be quite exhaustive. Mentioned are only a sample of the possible instruments currently used in SRB assessment.

The Anxiety Disorders Interview Schedule for Children (ADIS-C; Silverman & Nelles, 1988) is a semistructured interview that is often used in SRB assessment to assess for anxiety related problems that typically arise in childhood. The ADIS-C has demonstrated good test-retest reliability over a 10-24 day period (Silverman & Rabian, 1995). A study conducted by Grills and Ollendick (2003) indicated that there are unacceptable levels of agreement between child and parent reports between the ADIS-C and the Anxiety Disorders Interview Schedule for Parents. It was discovered that parent reports more closely resembled the diagnoses given by clinicians.

The School Refusal Assessment Scale Revised for Children and Parents (SRAS-R-C; SRAS-R-P; Kearney, 2006b), is a 24-item likert-type scale designed to support a four-factor model to assess school refusal, which include functions aimed 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" (p. 139), with an equal number of items devoted to each function. Test-retest reliability scores from 7-14 day intervals ranged from .56 to .78 for each function of SRB on the SRAS-R-C, and .61 to .78 for the SRAS-R-P. Interrater reliability between mothers and fathers ranged from .46 to .64. It is noted by Kearney that certain items (e.g.,18, 20, and 24) alter the scale in such a way that a three-factor model of SRB is produced, which combines both negative factors (i.e. avoid stimuli that provoke negative affectivity and escape aversive and/or evaluative situations). Caution is issued regarding the use of these items. When the three items are removed, a four-factor model is achieved for both versions.

Another frequently used tool in assessing for SRB is the Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1978). The RCMAS was developed as a self-report measure to assess for childhood anxiety. The RCMAS consists of 37 yes/no items designed for 6 to 19 year olds. The RCMAS yields a total score, as well as four subscale scores; Physiological, Worry and Oversensitivity, Social Concern and Concentration, and the Lie scale. Reynolds and Richmond report the internal consistency as being 0.85, and Wisniewski et al. (1987) reported test-retest reliabilities between .77 and .88.

The Fear Survey Schedule for Children-Revised (FSSC-R; Ollendick, 1983) is an 80-item scale that assess fear with a 3-point level of endorsement, ranging from *none, some,* to *a*

lot. The FSSC-R has demonstrated adequate to high levels of internal consistency, test-retest reliability, and the ability to discriminate clinical from normal individuals.

Behavioral

According to Lee and Miltenberger (1996) and King et al. (1995), a functional analysis can be used to help develop the most appropriate treatment for the child. The functional analysis can aid in identifying maintaining antecedents and consequences that perpetuate the behavior. According to Haynes and O'Brien (2000), the functional analysis accomplishes this by focusing on important, controllable causal relations among the variables that maintain and moderate behavior. Using Kearney and Silverman's (1990) categories of SRB, one can then decide which category the child best fits, and use this information to choose the related treatment option.

Treatment

Early treatments for SRB were nested in the psychodynamic paradigm. For example, Waldfogel et al. (1957) explain that treatment of school refusers involved theraprutic intervention focusing on unconscious conflicts. Treatment was expected to last from six months to a year. Much of the intervention strategy centers around the relationship between the child and his mother, with little attention being paid to the father.

Kearney and Silverman (1990) have outlined a diagnosis-treatment matrix that can be used to decide the best treatment option based upon the function of the refusal to attend school. In Category I SRB, *in vivo* desensitization or systematic desensitization are offered as the optimum treatment options (Lee & Miltenberger, 1996; Kearney & Silverman, 1990). Systematic desensitization involves three steps (Lee & Miltenberger, 1996). The first step is to teach the child relaxation techniques, typically with teaching the child to tighten and relax various groups of muscles. This should be practiced for 10-15 minutes every day to become comfortable with the technique before moving on to the next step. Following this, the child and therapist develop a fear hierarchy. In the hierarchy, the child will develop a list of 15-20 items that become increasingly more fearful on a scale of 0-100. The third and final step is to

have this child imagine each of the items on the hierarchy, in order from least fearful to most, while engaging in the relaxation techniques taught by his or her therapist.

It is suggested that Category II SRB be treated with cognitive restructuring and/or modeling (Kearney & Silverman, 1990). Cognitive restructuring is the process of changing unrealistic, irrational beliefs, in to thoughts that are logically clear and truthful (Ellis & Harper, 1975). Modeling, according to Lee and Miltenberger (1996), can come in three forms, all of which rely upon one or more individuals performing the desired behavior. These forms include video, live, and participant modeling. The latter of the three involves one person modeling the behavior, followed by the child practicing the behavior.

For Category III refusers, shaping and differential reinforcement are offered as potential treatments (Kearney & Silverman, 1990). Lee and Miltenberger (1996) also suggest extinction as a possible treatment option for Category III refusers. Shaping is carried out by having the child perform closer and closer approximations to the target behavior, in this case, school attendance (Lee & Miltenberger, 1996). Extinction, alternatively, is the cessation of rewards associated with avoiding school. In this case, the attention gleaned from the caregiver. Lee and Miltenberger explain that differential reinforcement of alternative behaviors is accomplished by reinforcing the child every time he or she produces a desired behavior. An example is provided of a child performing desired morning routine behaviors, such as getting dressed and leaving for school. Differential reinforcement of other behaviors (DRO) is done by reinforcing the child when he or she does not produce an undesired behavior for a specific amount of time. Lee and Miltenberger give an example of reinforcing a child who refrains from tantruming in the morning.

For the last category, Category IV, Kearney and Silverman (1990) suggest using contingency contracts to help curb this behavior. Contingency contracts are created by both parties, specifically, the caregiver(s) and the child, and outline what behaviors will be rewarded and what behaviors will be punished. Along with this, both parties will decide how these rewards and punishments will be carried out (Lee & Miltenberger, 1996).

In a survey of psychologists who deal with SRB in their practices, Kearney and Beasley (1994) found that, out of the 63 psychologists that responded, 12.9% of all SRB cases took less than one month's time to treat. SRB was treated in 1-3 months for 34.6% of the ca-

ses, 4-6 months for 34.6%, 7-9 months for 5%, 10-12months for 3.8%, 13-24 months for 8.4%, and greater than 25 months for 3.4%. As for the treatments used for SRB, it was reported that parent training and contingency management was used 40.3% of the time at a success rate of 75%, cognitive restructuring 14.4% of the time with 82% of these cases being successful, contingency contracting 12.2% of the time with 60% success, forced school attendance was used for 11.6% of the cases with 100% success, imaginal or *in vivo* systematic desensitization 8.3% of the time with 75% success, modeling and role playing 6.6% for all cases with 55% success, play therapy was utilized 6.1% of the time at 70% success, and pharmacotherapy 0.6% of the time with a 100% success rate. Kearney and Beasley suggest that SRB that has occurred for less than two weeks should be treated with forced attendance.

More research needs to be conducted in to prescriptive treatments, which Burke and Silverman (1987) described as empirically validated treatments that are applied to problems based upon their functional relationships. Treatments based upon functional relations have been outlined by Kearney and Silverman (1990), as mentioned above.

Furthermore, caution has been suggested by Kearney and Bates (2005), noting that many interventions are not easily delivered by school-based personnel. Some suggested intervention strategies involve utilizing monitoring systems that can include the assistance of the parents, timely feedback, and reinforcement practices for achieving desired outcomes, however minor they may be. The authors also suggest utilizing a team to implement the intervention that consists of counselors, teachers, and other health care providers affiliated with the school. It is also suggested that at least two weeks be given to the intervention before deciding to attempt an alternative strategy. An analysis of noncompliance concerns is outlined that provides techniques for dealing with noncompliant children, parents, and teachers, such as rapport building, addressing child-teacher concerns, and assessing for external events that may impact the intervention (e.g., family conflict, major life changes).

Although behavioral treatment is effective, it is sometimes necessary to use medication in the treatment of SRB (King et al., 1995). MAOI and cyclic antidepressants are used, as well as anxiolytics and stimulants. The anxiolytics, however, are rarely used and there is currently no evidence supporting the effectiveness of the use of stimulant medication in treating SRB. King et al. warn against the use of medication in treating SRB, and suggest using safer

methods if possible. If medication is to be used, a single drug is preferable over several medications.

Outcome Research

Kearney and Silverman (1990) were able to effectively treat six of seven children with Category I, II, III, and IV SRB based upon the recommended treatments for each category. For example, Kearney and Silverman were presented with a case of SRB involving a 9-year-old boy who was referred after missing six days of school. Somatic complaints were registered with his parents prior to venturing to school. Due to his fearfulness, he was diagnosed as a Category I school refuser. This child was treated with *in vivo* desensitization and relaxation training. After eight sessions, treatment was halted as the somatic complaints had ceased, and the child had return to school full time.

Kearney and Silverman were also able to treat three of four clients with Category II SRB using CBT and/or modeling. For example, a 15-year-old male who had just been moved from a classroom setting designed for children with learning disabilities to a regular classroom was treated for his SRB. The individual reported a desire to avoid school based upon negative emotional reactions to the fact that he was failing several of his classes. During the four weeks of treatment, this child managed not to be absent from school at all. The intervention, which focused on CBT and/or modeling, although it was not made clear as to which aspect was used on this particular individual, showed an increase in social competence and a decrease in social anxiety.

As for Category III SRB, Kearney and Silverman applied shaping through DRO in a 9-year-old Caucasian male who preferred to stay at home, and had done so for four months. Along with his SRB, the child also displayed oppositional behaviors, which, according to the parents, were directly related to his SRB. The parents were instructed to ignore the non-attendance of school, during which time the child was to be confined to his room, and reinforce school attendance through rewards. Eleven days of school were missed during the first three weeks of intervention, while the remaining four weeks were comprised of 100% attendance in school.

Category IV SRB was witnessed in one individual who periodically missed school due to complaints of headaches and stomachaches. Coupled with this was an increase in oppositional behaviors within the homestead. Contingency contracts were used to increase school attendance. Rewards and punishments were set up and agreed upon by all parties involved. After the start of intervention, the child managed to only miss one day of school that resulted from an actual illness, and not feigned symptomology.

A more in-depth analysis of using DRO to treat SRB was documented by Chorpita et al. (1996) with a 10-year-2-month old girl who was diagnosed as having Separation Anxiety Disorder and School Phobia. It was reported that she would experience nausea, as well as other physical symptoms, whenever she was removed from her parents' presence. A functional assessment revealed that her SRB was motivated by the desire to receive attention and avoid being separated from her parents. Treatment was based on the extinction of four target behaviors: somatic complaints, anger and tantrums, crying, and other complaints. As self-monitoring proved to be ineffective, the mother was solely responsible for providing written records of the occurrences of the four target behaviors. At a two-week follow-up, both Separation Anxiety Disorder and School Phobia were in remission, and at a 24-month follow-up, both diagnoses were completely absent from the child. No treatment was assigned to the target behavior 'other complaints,' but an interdependence of baselines was present, indicating a generalizing effect of treatment to this behavior.

Houlihan and Jones (1989) successfully treated a 13-year-5-month boy who was a Type II school phobic. He was diagnosed as having Overanxious Disorder of Childhood, obsessive compulsive features, and Dysthymia, Secondary Type, early onset. During the 6th grade, it was reported that the child had attended 21 of 180 school days. *In vivo* systematic desensitization was implemented as the treatment. This included walking the halls of school with the therapist, spending time in school with the therapist present (the school attendance aspect of which was increased while the presence of the therapist was decreased throughout), and finally, attending lunch period in the cafeteria, which was a very difficult situation for the child to be in. During the 6th grade, the child missed a total of 159 school days. The following year, the year of intervention, the child was present at school for 152 of the 180 days of school. At a one-year follow-up, he attended 166 of 180 days. Along with the increase in attendance, depressive and obsessive compulsive symptoms were decreased, providing evidence of generalization of the intervention.

Meyer et al. (1999) have shown that shaping can be an effective treatment for certain cases of SRB. An 18-year-old male with Moderate Mental Retardation and Moderate Cerebral Palsy who was admitted to an inpatient unit for individuals with severe destructive behaviors was treated for SRB that began 6-weeks prior to therapy by using shaping via positive reinforcement, response cost, and fading of the therapist involved with intervention. This was implemented to effect a change on four target behaviors: aggression (e.g., hitting, kicking), disruptive behaviors (e.g., throwing objects), verbal aggression, and compliance with a morning hygiene ritual. It was discovered that his SRB was reinforced by his mother, who would engage in play time with him whenever he refused to attend school. The goal of treatment was to generalize treatment outcomes from the institution to the home, which, after intervention, was completely successful.

Although much has been written about SRB, it is unclear whether other factors may be influencing the effectiveness of treatment. Current research indicates that there may be a connection between involvment in extra-curricular activities and academic performance (Moriana, Alós, Alcalá, Pino, Herruzo, & Ruiz, 2006). Perhaps involvment with these activities could produce more salient changes in individuals, even if only within specific subtypes. Furthermore, the role of parental or familial involvment as well as issues concerning the level of parental education with post-treatment academic success may warrant further investigation, as there may be a relationship between these factors and academic success (Adeyemo, 2006; Lozano Diaz, 2003).

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