Predictors of positive reinforcement-based school refusal behavior

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PREDICTORS OF POSITIVE REINFORCEMENT-BASED
SCHOOL REFUSAL BEHAVIOR

by

Tami L. Roblek

A thesis submitted in partial fulfillment
of the requirement for the degree of

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in

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ABSTRACT

The present study empirically investigated child and family variables that differentiated attention-getting and positive tangible reinforcement dimensions of SRB. Age, gender, severity of SRB, level of generalized anxiety, type of diagnosis, level of fearfulness, level of somatic complaints, and type of familial environment were evaluated. Youngsters (n=129) and their parents were administered various diagnostic, self-report, and family measures. Children who refused school for attention were younger and displayed more diagnoses of separation anxiety than children who refused school for positive tangible reinforcement. These differences were consistent across child-, parent-, and composite-derived functions. Children who refused school for attention did not differ significantly from children who refused school for positive tangible reinforcement with respect to gender, severity of SRB, and type of familial environment regardless of the source of the report. Results are discussed with respect to implications for classification, assessment, and treatment of children with SRB.
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CHAPTER 1

INTRODUCTION

School nonattendance in children and adolescents has long been viewed by researchers, educators, and clinicians as an extremely damaging societal and international problem. Most school absenteeism is nonproblematic and short-lived (80%; Hersov, 1985). However, some school absenteeism is problematic due to deliberate parental attempts to keep a child out of school for economic purposes, child protection, or maintenance of the child's status as a "safety person" in cases of adult anxiety disorder (Berg, 1976; Kahn & Nursten, 1962). Additionally, some children stay out of school to escape familial abuse or are absent due to circumstances beyond their control (Rafferty & Shinn, 1991). The largest subset of children with school absenteeism, however, consists of those who avoid school on their own without substantial familial/societal causes. Many clinicians agree that the study of school absenteeism is critical, and over the last several decades interest in this area has grown. Still, difficult problems are associated with the classification, assessment, and treatment of school nonattendance (Kearney & Silverman, 1991).
Difficulties in classifying school nonattendance spring partially from problems of definition, which themselves spring from the heterogeneity of behaviors common to those who refuse school. Thus, there is no agreed-upon set of criteria to delineate children with school attendance problems. Instead, the problem has been defined by such terms as truancy, neurotic maladjustment, school phobia, and separation anxiety. For the present study, the term "school refusal behavior" will be used because it emphasizes child-motivated refusal to attend school, difficulties remaining in classes for an entire day, and behavior related to nonattendance (Kearney & Silverman, 1996). Specifically, the definition of school refusal includes youth aged 5-17 years who (1) are completely absent from school, and/or (2) initially attend then leave school during school days, and/or (3) go to school following behavior problems such as morning temper tantrums, and/or (4) display unusual distress during school days that precipitates pleas for future nonattendance (Kearney & Silverman, 1996).

Because school refusal behavior does not receive recognition as a formal diagnosis in the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, [APA], 1994), and because of its heterogeneity, various ways to subtype school attendance problems have been proposed. Recently, researchers have classified this population by evaluating the function of the school refusal behavior and have used assessment measures to assign
prescriptive treatment strategies for individual cases of school refusal behavior. This paper reviews literature relevant to school refusal behavior, including a description of its clinical features, prevalence, co-occurring disorders, differential diagnosis, and classification systems. In addition, limitations of prior classification and treatment of this population are presented.

Clinical Features

A variety of clinical features are observed in youngsters with school refusal behavior. Some youngsters who refuse school show signs of maladaptive anxiety, excessive fearfulness, or panic when confronted with a specific object in the school environment, (e.g., bus, teacher, hall; Granell de Aldaz, Vivas, Gelfand, & Feldman, 1984; Kearney & Silverman, 1990). A larger subset of those who refuse school have fears of evaluation, interpersonal interaction, vomiting in school, or entering a new school (King, Ollendick, & Tonge, 1995). Other youngsters with school refusal behavior are afraid of separation from their parents. These youngsters may initially leave for school, but then rush home in a state of anxiety before entering the school building (Hersov, 1977). Typically, this youngster stays at home throughout the day under the care of the mother or other family members, but this is not always the case. In addition, these children and adolescents may verbally protest, cry, and throw temper tantrums when asked to attend school.
Many of these youngsters with school refusal behavior show marked physiological changes (i.e., muscle tension, breathing irregularities; King, Ollendick, & Tonge, 1995) or complain of physical illness such as headache and stomach pain (Granell de Aldaz, Feldman, Vivas, & Gelfand, 1987; Lang, 1982). Depressive features may also be present in those with school refusal behavior, including irritability, tearfulness, feelings of worthlessness, low self-esteem, guilt, and sleep disturbance (Agras, 1959, Bernstein, 1991). Social maladjustment and poor image problems are also prevalent (Esveldt-Dawson, Wisner, Unis, Matson, & Kazdin, 1982; Nichols & Berg, 1970).

Many youngsters who refuse school may also present with externalizing problems such as conduct and oppositional behaviors. Some of these youngsters don't display fear, anxiety, or depression when approaching the school setting. Indeed, they may refuse school to watch television, play videogames, or sleep. These children and adolescents may show antisocial behaviors such as stealing, lying, or destructiveness. Additionally, they are usually absent from school without parental knowledge.

Most of these youngsters exhibit a clinical collage, combining many different symptoms into a distinct profile not shown by any other youngster. For example, a child may manifest social anxiety, low self-esteem, and conduct problems or extreme fearfulness, physical complaints, and depression. In addition, some youngsters may present with a
symptom such as fear of separation from one's mother and then later refuse to go to school because they would rather play videogames at home.

Prevalence, Onset, Course, and Demographic Characteristics

Granell de Aldaz et al. (1984) have reported the prevalence rate of school refusal behavior to fluctuate between 0.01 and 25.0%. Kearney and Beasley (1994) reported clinical prevalence to be 6.08%. Varying criteria to describe school refusal behavior (e.g., nonattendance, fear, problematic family relationships) have resulted in the vastly different prevalence rates (Kearney & Silverman, 1996).

According to Smith (1970), onset of school refusal behavior can occur throughout the entire range of school years, but major peaks occur at 5 to 6 and 11 to 12 years of age. With respect to gender, there are no statistically significant differences in school refusal behavior (Berg & Fielding, 1978). In addition, Lang (1982) proposed that more children with school refusal behavior come from families of lower socioeconomic status compared to a control group of children without school attendance problems. Last and Strauss (1990) found that approximately one-half of their sample of youngsters with school refusal behavior came from lower socioeconomic status families. However, King et
al. (1995) report that youngsters with school refusal come from varying socioeconomic status levels.

Short-term consequences of school refusal behavior include social alienation, declining school performance, increased family conflict, and a general disruption of daily activities (Kearney & Roblek, in press). Long-term consequences include, but are not limited to, psychosocial, occupational, and marital problems (Berg, 1970; Hibbett, Fogelman, & Manor, 1990; Hibbett & Fogelman, 1990), anxiety and depression (Berg, Marks, McGuire, & Lipsedge, 1974; Tyrer & Tyrer, 1974), alcoholism and criminal behavior, psychiatric disturbance, and economic dispossession (Flakierska, Linstrom, & Gillberg, 1988; Robins & Ratcliffe, 1980; Timberlake, 1984).

Family Dynamics

Clinicians have also looked at the family functioning of youngsters with school refusal behavior, and this has led to some interesting clinical observations. Kearney and Silverman (1995) found that five familial subtypes comprised most families of youngsters with school refusal behavior: healthy, isolated, enmeshed, detached, and conflictive. In addition, a family may have a mixed profile incorporating more than one of these subtypes. The healthy subtype is characterized by normal levels of cohesion and expressiveness and low levels of conflict. The isolated subtype is characterized by little extrafamilial contact.
The enmeshed subtype is characterized by a lack of cohesion and independence and overinvolved family members (Kearney & Roblek, 1996). These findings of overinvolvement and dependency between family members are prevalent in families of children with school refusal behavior in the literature. For example, Waldfogel, Coolidge, and Hahn (1957) and Coolidge, Tessman, Waldfogel, and Willer (1962) found that it is common for families of children with school phobia to be excessively dependent on each other and that many of these children have difficulty achieving separation from their parents. In addition, Torma and Halsti (1975) found that 77% of children with school phobia had overprotective mothers and that 59% of these families had discipline that was inconsistent. Mothers of youngsters with school refusal have also been depicted as controlling, dominant, or ambivalent with their children (Eisenberg, 1958; Waldron, Shrier, Stone, & Tobin, 1975). Fathers have been depicted as ineffective (Davidson, 1960), absent, or lacking authority (Takagi, 1972).

The detached and conflictive subtypes are characterized by high conflict, low cohesion, and poor methods of problem-solving and communication (Kearney & Roblek, 1996). Conflict and detachment are also prevalent in families of youngsters with school refusal behavior reported in the literature. Reid (1985), for example, found that conflict in these families may be due to inadequate boundaries between parents and children. Torma and Halsti (1975) found
that family disintegration is common in these types of families. Additionally, they reported that 53% of children with truancy have relationships with both parents that are distant, powerless, and emotionally inadequate.

Furthermore, for all subtypes, marital conflict and parent psychopathology (e.g., anxiety, depression, and alcohol abuse) have been cited as frequent occurrences in families of youngsters with school refusal (Berg, Butler, & Pritchard, 1974; Lang, 1982; Last, Francis, Hersen, Kazdin, & Strauss, 1987). For example, Bernstein and Garfinkel (1988) found, in a sample of children with school refusal, that 70% of parents had a DSM-III diagnosis of depression and/or anxiety. In addition, Torma and Halsti (1975) found, in a sample of 73 children and parents of children with school attendance problems, that 29% of the mothers and 46% of the fathers showed mental disturbance.

Differential Diagnosis

School refusal behavior is omitted as a "clinically significant behavioral or psychological syndrome" in the DSM-IV (APA, 1994). Instead, this problem is listed in the DSM-IV as a symptom of two disorders: separation anxiety and conduct disorder. In addition, researchers and practitioners often diagnose school refusal behavior as panic disorder, simple phobia, social phobia, avoidant disorder, posttraumatic stress disorder, overanxious disorder, depression, and oppositional defiant disorder.
Last and Strauss (1990) reported that separation anxiety disorder was the most common primary diagnosis in this population, followed by social phobia, simple phobia, panic disorder, and posttraumatic stress disorder. In the same study, Last and Strauss reported that overanxious disorder was the most common co-occurring disorder with school refusal behavior, followed by major depressive disorder, non-school related social phobia, non-school related simple phobia, and avoidant disorder.

Bernstein and Garfinkel (1988) found that five of six children with school attendance problems met criteria for both depressive and anxiety disorders. Kearney and Silverman (1996) reported that a large percentage of youngsters with school refusal behavior met criteria for multiple anxiety disorders and/or anxiety with other disorders (i.e., phobia, depression, oppositional defiant disorder). However, approximately 25% of children with school refusal behavior do not meet criteria for any mental disorder (Kearney, 1992).

**Historical Methods of Classifying School Refusal Behavior**

Researchers first viewed nonattendance as a societal problem (illegal truancy) rather than a clinical entity, but this changed in the 1930s. Broadwin (1932) was the first to describe how truancy was a diverse phenomenon. He stated that truancy "may represent an act of defiance, an attempt
to obtain love, or escape from real situations to which it is difficult to adjust" (p. 254). In addition, Partridge (1939) identified a type of truancy in youngsters characterized by "peculiar states of mind" (p. 68). These youngsters were unlike previous descriptions of youngsters with truancy in that they displayed no overt disobedience other than a refusal to go to school. He labeled this type of truancy "psychoneurotic truancy" (p. 68) and described it as a form of "mother-following syndrome" (p. 77). This syndrome may occur as a result of an overly strong emotional attachment between parent and child, particularly the mother, the basis of which was thought to be overprotection.

In the 1940s, truancy was separated from school refusal. Truancy was regarded as one component of acting out or disruptive behavior, whereas school refusal was thought to include youngsters who displayed some discomfort about school attendance despite their desire to be in school. Therefore, truancy was associated with juvenile delinquency and externalizing behavior problems (i.e., stealing, lying, and cheating), and school refusal was associated more closely with neurotic maladjustment (Kearney, Eisen, & Silverman, 1995).

Within the area of school refusal, the concept of "school phobia" was developed (Johnson, Falstein, Szurek, & Svendsen, 1941). During the 1940s, psychodynamically-oriented psychologists (e.g., Johnson, Falstein, Szurek, & Svensen, 1941) viewed "school phobia" as a manifestation of
separation anxiety between a mother and her child. Three cardinal facets of this relationship were acute anxiety in the child, increased anxiety in the mother, and a poorly resolved early dependency relationship of the child to his/her mother (Johnson et al., 1941). According to the psychodynamicists, mothers of children who have school phobia are ambivalent and encourage overdependence in the children to satisfy their own desire to be needed, resulting in repressed hostility in both mother and child. The mother becomes hostile because she realizes that she has not been successful in fostering independence in her child. As a result, she feels guilty and engages in overprotection of the child. Concurrently, the child develops anger and hostility toward the mother because of her overindulgence, followed by a displacement of these emotions to the school setting (Johnson et al., 1941; Kelly, 1973).

During the 1950s and 1960s, psychologists began to look at school phobia/separation anxiety in terms of other familial dynamics. Waldfogel et al. (1957) believed that too much attention was placed on the idea of unconscious maternal rejection as the cause of school phobia. Instead, they believed that the mother feels incompetent and unsure of being a "good" mother. Therefore, she compensates for these feelings by being overprotective. In addition, Waldfogel et al. reported that the fathers of these youngsters were passive and unable to develop their role as fathers because of a dominant mother. Also, it was believed
that these fathers and mothers were looking to each other for gratification of their own dependency needs. In contrast, Levanthal and Sills (1964) stated that children at risk for school refusal behavior overvalued themselves because of overindulging mothers who instill falsely inflated self-images. Within the school setting, the children then become overwhelmed and their self-images threatened because of new expectations from teachers and peers. The children subconsciously resist being evaluated in the same manner as other children and seek the protection and reassurance offered at home by their mothers. Over the next few years, psychologists provided research to support the contention that separation anxiety was a key aspect of school phobia (Bowlby, 1973). School phobia and separation anxiety were thus the dominant explanations for school refusal behavior for several years.

Starting in the late 1950s, theorists attempted to further dichotomize school refusal behavior. For example, Coolidge, Hahn, and Peck (1957) proposed neurotic and characterological subtypes of school phobia. Children of the neurotic type displayed acute and dramatic school phobia. They were younger, highly anxious, and fearful of separating from familiar surroundings, whereas children of the characterological type displayed a gradual onset and a regression in their overall personality. These latter youngsters were older, more deeply disturbed, and displayed more serious antisocial behavior. In addition, Kennedy...
(1965, 1971) proposed a Type I and Type II categorical model. Type I children displayed acute onset of school absenteeism involving one episode, whereas Type II children evidenced gradual onset of school absenteeism involving multiple episodes. Another dichotomizing classification system focused on "acute" and "chronic" (Berg, Nichols, & Pritchard, 1969). "Acute" youngsters displayed less severe school refusal behavior and attended school regularly for at least three years, whereas "chronic" youngsters displayed more severe school refusal behavior, and did not attend school regularly in the past.

Around the same time, theorists began to look at school phobia/separation anxiety more in behavioral terms. The basic psychodynamic principles were retained but were mixed with more learning-based principles. For example, the concept of school phobia as a learned behavior was introduced, the avoidant behavior characteristic of phobias was emphasized, and attempts to empirically define variables related to school phobia were made (Kearney et al., 1995). For example, Berg et al. (1969) devised a definition of school phobia that represented a union of psychodynamic and behavioral perspectives. Their diagnosis of school phobia consists of four criteria, including (a) severe difficulty attending school (which results in a prolonged absence), (b) severe emotional upset (e.g., fear, temper outbursts, and somatic complaints), (c) staying home with parental knowledge, and (d) absence of antisocial behavior (e.g.,
lying, stealing, and destructiveness). This definition is important in the history of school refusal behavior because it does not assume etiology; rather, it permits many causal patterns (King et al., 1995).

Within the past 20 years, the classification of school refusal behavior has shifted toward empirical or diagnostic groupings of people with school refusal behavior. Achenbach and Edelbrock (1978, 1979), for example, developed an empirical classification system for childhood behavior disorders based on a factor analysis of parent ratings of child behavior. Groups of behaviors were specified for boys and girls, and an overall internalizing versus externalizing dimension was developed for both genders and certain age groups. School refusal behavior is indirectly represented in several categories. Problems with discriminant validity for classifying subtypes of school refusal behavior have been proposed with this type of classification system. According to Kearney and Silverman (1996), the ability of this system to discriminate clinical and nonclinical youngsters with school refusal behavior is questionable because clinical levels of behavior are often absent. Also, all gender and age groups tend to exhibit more internalizing than externalizing behavior. Moreover, there is a significant correlation between internalizing and externalizing behaviors. Researchers have found (Hinshaw, 1992) that this correlation is common when psychopathology is broad, as is the case with school refusal behavior. As a
result, subtyping based on different gender and age profiles of internalizing and externalizing behavior is dubious.

During the 1980s and the early 1990s, with the publication of the DSM-III, the DSM-III-R, and the DSM-IV, the constructs of separation anxiety and school phobia were identified as the "primary psychological mechanisms of problematic school refusal behavior" (American Psychiatric Association, 1980, 1987, 1994; Kearney et al., 1995, p. 68). However, because school refusal behavior is heterogeneous in nature, deducing subtypes from only these DSM diagnostic constructs poses many problems. For example, Kearney (1992) found that a large percentage of youngsters with school refusal behavior met criteria for multiple anxiety disorders and/or anxiety with other disorders (e.g., phobia, depression, oppositional defiant disorder). Also, as mentioned earlier, about one quarter of these youngsters meet criteria for no mental disorder. Therefore, no clear diagnostic profile for school refusal behavior exists and multiple concurrent diagnoses obscure the clinical picture.

Another problem inherent in classifying school refusal behavior based on the constructs of separation anxiety and school phobia is that they are ill-defined and not representative of youngsters with school refusal behavior. For example, a diagnostic criterion for separation anxiety disorder is a "persistent reluctance or refusal to go to school" (APA, 1994, p. 113) to stay home with major attachment figures. Thus, if a child refused to go to
school to obtain tangible reinforcement (i.e., television), and displayed no other antisocial behaviors, the only applicable diagnosis would be separation anxiety disorder (Kearney et al., 1995). On the other hand, if a child refused to go to school to avoid that setting, the only applicable diagnosis would be specific phobia (Kearney et al., 1995). One essential feature of this diagnosis is "marked, persistent, and excessive or unreasonable fear when in the presence of, or when anticipating an encounter with, a specific object or situation" (APA, 1994, p. 405).

However, Barton, Kearney, Eisen, and Silverman (1993) reported data from 150 children and adolescents referred to childhood anxiety disorder clinics or solicited from the general community with (1) general school refusal behavior and anxiety disorders, (2) anxiety disorders without school refusal behavior and (3) no school refusal and no anxiety disorder. They found that youngsters with school refusal behavior report, on the Fear Survey Schedule for Children-Revised (FSSC-R; Ollendick, 1983), "some" fear rather than "a lot" of fear when "having to go to school" compared to those with or without anxiety disorders and without school refusal behavior. This seems to show that the amount of "fear" shown by the sample of children is not of a clinically excessive nature. In addition, Barton et al. (1993) found that only 39.1% of a sample of children with problematic school nonattendance indicated "a lot" of fear when rating the FSSC-R item, "having to go to school."
Therefore, it seems excessive fear is not highly representative of this population.

Moreover, the idea of a "school" phobia may violate the assumption that a phobia should be directed toward a specific stimulus. For example, youngsters with school refusal behavior exhibit general social or evaluative apprehensions more often than fears of an individualized nature. In addition, classifying school refusal behavior based on these DSM constructs doesn't account for youngsters who present with general anxiety but no phobia. Therefore, according to Kearney et al. (1995), "the traditional concept of 'school phobia' and its theorized primary psychological mechanism, separation anxiety," (p. 68) may be viewed too narrowly and not be representative of all youngsters who display school refusal behavior.

Despite the problems inherent to classifying school refusal behavior via the DSM, some authors have attempted to classify this population using diagnostic categories. For example, Last and Strauss (1990) concluded that school phobia and separation anxiety disorder may be separate categories of school refusal. Bernstein and Garfinkel (1986) attempted to classify children with school refusal by focusing on the presence of an anxiety disorder, an affective disorder, both, or neither. Additionally, Hersov (1985) attempted to classify school refusal based on internalizing (i.e. emotionally-disordered - depression,
anxiety, somatic complaints, fear) and externalizing (conduct disordered, truancy) symptoms.

Limitations of Past Literature and the Functional Model of School Refusal Behavior

Although much of the previous literature regarding school refusal behavior attempts to classify subtypes, several drawbacks are evident. For example, many of the previous classification models do not rely on explicit, reliable, valid, and applicable criteria to define school refusal behavior; instead they are based upon clinical consensus, measures with unknown reliability (Burke & Silverman, 1987) and/or information from parents only. Also, the models rely on diagnostic categories that are not highly representative of school refusal behavior. In addition, taxonomists in this area have not outlined prescriptive treatment strategies for individual cases of school refusal behavior. As a result, youngsters with school refusal behavior are treated in the same way regardless of their individual symptoms (Kearney & Silverman, 1996).

In response to these concerns, a functional approach to classifying school refusal has been developed by Kearney and Silverman (1990, 1993, 1996). In this system of classification, identification of specific subtypes are based on both categorical and dimensional aspects. Here,
"school refusal behavior is divided into specific categories as well as broader dimensions (e.g., functions) that are common to each category" (Kearney & Silverman, 1996, p. 345).

According to Kearney and Silverman (1996), categories of school refusal behavior include (a) problematic versus nonproblematic, (b) parent-motivated or primary familial/societal causes versus child-motivated, and (c) self-corrective versus acute versus chronic. Problematic refusal to attend school includes absence not due to legitimate illness or handicap. Nonproblematic refusal to attend school is short-lived and includes absence due to legitimate illness or handicap. Problematic refusal to attend school may be induced by parents, siblings or others, or the child. School refusal behavior may be classified as self-corrective, acute, or chronic if induced by the child (Kearney & Silverman, 1996).

After the school refusal behavior is initially classified, a dimensional approach is used to identify maintaining variables, or functions. Kearney and Silverman (1990) hypothesized that youngsters refuse school for one or two dimensions of reinforcement (i.e., negative and/or positive). Within the negative reinforcement dimension, children may refuse school to (1) avoid specific (e.g., classrooms, teachers, buses) or general stimuli provoking negative affectivity (e.g., anxiety, depression, low self-esteem), and/or (2) escape aversive social/evaluative
situations (e.g., public speaking, interacting with peers). Within the positive reinforcement dimension, children may refuse school to (1) gain verbal/physical attention (e.g., via tantrums, clinging, noncompliance), and/or (2) pursue positive tangible reinforcement (e.g., television, visiting with friends, gambling).

Kearney and Silverman (1993) devised a rating system to identify the primary motivating variable of school refusal behavior. In addition, a dimensional profile of all other functional conditions can be assessed to determine the influence of all germane components. These functional conditions were chosen because of their capability in describing all youngsters with school refusal behavior. Also, because of the heterogeneity of this population, allowances are made for youngsters who primarily refuse school for one or more of these reasons but may exhibit aspects of other functional conditions as well (Kearney & Silverman, 1991). In general, the negative reinforcement dimension tends to be associated with internalizing behavior problems (depression, anxiety, fear), whereas the positive reinforcement dimension tends to be associated with separation anxiety and externalizing behavior problems (conduct disorder, oppositional/defiant disorder).

Research results have indicated some preliminary correlates of negatively reinforced school refusal behavior. For example, Kearney and Silverman (1993) found that scores on the Children's Manifest Anxiety Scale - Revised (CMAS-R)
and Children's Depression Inventory were highly positively correlated with the negative reinforcement dimension. Surprisingly, levels of fearfulness were correlated with attention-getting behavior (positive reinforcement dimension). Moreover, children self-rated with negatively reinforced school refusal behavior were diagnosed with internalizing disorders such as major depression and overanxious disorder in 60% of the cases. Social phobia and generalized anxiety were also positively associated with these dimensions.

In contrast, children with externalizing problems were significantly associated with positively reinforced school refusal behavior. Children self-rated with positively reinforced school refusal behavior were diagnosed with separation anxiety disorder or no mental disorder in 87.5% of cases. Parents who rated their children with positively reinforced school refusal behavior also indicated that the children met criteria for separation anxiety disorder, attention deficit disorder, oppositional or conduct disorder, or no mental disorder in 72.7% of cases.

Interface with Assessment and Treatment

As discussed earlier, this functional system of classifying youngsters with school refusal behavior has been the first to formally interface assessment devices with individual prescriptive treatment strategies. For those children refusing school to avoid negative affectivity-

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provoking stimuli, a combination of relaxation training, breathing retraining, and gradual reintegration into the school setting may be beneficial (Kearney & Silverman, 1996). For youngsters who primarily refuse school to escape aversive social/evaluative situations, a combination of modeling, role play, and cognitive restructuring may be useful to increase social and coping skills and reduce cognitive distortions (Cartledge & Milburn, 1995). For families of youngsters who refuse school for attention, parental training in contingency management procedures is recommended (Forehand & McMahon, 1981). For families of youngsters who primarily refuse school for positive tangible reinforcement, familial contingency contracting may be helpful (Sanders & Dadds, 1993). A combination of these can be utilized in cases where a child refuses school for multiple reasons (Kearney & Albano, in press).

The Current Study

The functional approach to classifying school refusal behavior reconceptualizes this heterogeneous population and links assessment and prescriptive treatment for youngsters with school refusal behavior. However, additional research on the functional approach to classifying school refusal behavior needs to be conducted. For example, some data are available with respect to the positive reinforcement dimension, which includes positive tangible reinforcement and attention-getting behavior, of the functional approach.
However, little is known about what child and family variables are associated with the subtypes constituting this dimension. Potential variables include (1) age, (2) gender, (3) severity of school refusal behavior, (4) level of generalized anxiety, (5) type of diagnosis, (6) level of fearfulness, (7) level of somatic complaints, and (8) type of familial environment.

The present study examined variables that may discriminate between attention-getting and positive tangible reinforcement-based school refusal behavior. Child-, parent-, and composite-derived functions of school refusal behavior were examined to determine which source most accurately predicts group membership. Also, potential predictors were identified that may be helpful in linking assessment strategy with prescriptive treatment. A brief description of each proposed variable is presented next.

Variables of School Refusal Behavior

Age

Youngsters who refuse school for attention appear to be younger than those who refuse school for positive tangible reinforcement (Kearney & Roblek, in press). Recent research indicates that many younger children refuse school via tantrums, whining, and crying to coerce parents into agreeing with demands for extra attention. Also, as described earlier, the attention-getting function is synonymous with separation anxiety (Kearney & Albano, in
According to King et al. (1995), it is common for younger children to display distress when separated from the person who cares for the child. In addition, Ollendick (1983) reported an age-related decline in self-reported fears, especially separation from parents. Kearney et al. (1995) suggested that separation anxiety is most "characteristic of younger children who initially refuse school, but older children do not report much fearfulness of being away from their parents or away from home" (p. 76). In addition, Kearney and Silverman (1993) found that younger children are more often found in the attention-getting group, whereas older children are more often found in the positive tangible reinforcement group.

Gender

More females appear to refuse school for attention, whereas more males appear to refuse school for positive tangible reinforcement. As indicated earlier, school phobia, emotional disorders, and separation anxiety are related to the attention-getting function of school refusal behavior. Van houten (1948), Thompson (1948), and Jacobsen (1948) found that school phobia occurs most often in girls than boys. Bools, Foster, Brown, and Berg (1990) found that significantly more children with school refusal behavior and children with emotional disorders were girls. Orvaschel and Weissman (1986), Last, Strauss, and Francis (1987), Last, Francis et al. (1987), and the APA (1994) report that
separation anxiety disorder is more prevalent in females than in males. Berry and Lizardi (1985) also report that most authorities (Kelly, 1973; Johnson, 1979; Baker & Wills, 1978) differentiate between truancy and school phobia and that the incidence of school phobia is detected more frequently in girls than boys.

As indicated earlier, conduct disorder, oppositional defiant disorder, and problems with truancy are related to the positive tangible reinforcement function of school refusal behavior. Kirkpatrick and Lodge (1935) found that, of 752 truants, 481 were boys and 271 were girls. Bools et al. (1990) found that significantly more children with truancy and conduct disorder were boys. In addition, Conduct Disorder and Oppositional Defiant Disorder is more prevalent in males as reported in the DSM-IV (1994). Specifically, more females appear to refuse school for attention, whereas more males appear to refuse school for positive tangible reinforcement.

Severity of School Refusal Behavior

Youngsters who display acute school refusal behavior appear more likely to refuse school for attention, whereas youngsters who display chronic school refusal behavior appear more likely to refuse school for positive tangible reinforcement. Severity of school refusal behavior can be defined as the percentage of days missed from school. Acute school refusal refers to cases that persist after two weeks
but before one year. Chronic school refusal refers to cases that persist after one year. Both acute and chronic school refusal must have been a problem for a majority of that time when school is in session (Kearney & Silverman, 1996).

Coolidge et al. (1957) and Kennedy (1965) report that those with an acute onset of school refusal are usually younger, whereas chronic presentations of school refusal are more typical of older children and adolescents. Berg, Butler, and Franklin (1993) found that 80 adolescents with chronic school refusal behavior exhibited problems with lying, stealing, vandalism, forgery, and fighting and that a deprived home environment and unsatisfactory familial relationships were common. Kahn, Nursten, and Carroll (1996) found that many older children who display chronic school refusal behavior often have broken homes, little discipline in their lives, and few warm relationships. It is thought that children who display acute school refusal behavior more likely refuse school for attention, whereas those who display chronic school refusal behavior more likely refuse school for positive tangible reinforcement.

Diagnosis

Youngsters with a diagnosis of separation anxiety disorder appear more likely to refuse school for attention, whereas youngsters with diagnoses of oppositional/defiant, conduct disorder, or no mental disorder appear more likely
to refuse school for positive tangible reinforcement (Kearney & Silverman, 1993).

Wachtel and Strauss (1994) reported that children who are truant do not experience anxiety when they are at school and often display behaviors such as lying, stealing, and cheating, which are rarely seen in children with SAD. Recent literature has reported that older children refusing school for positive tangible reinforcement may be largely associated with externalizing symptoms such as aggression, running away, and noncompliance (Kearney, 1992). This supports the conclusion that children diagnosed with oppositional/defiant, conduct disorder, or no mental disorder appear more likely to refuse school for positive tangible reinforcement.

General Anxiety

As discussed earlier, the attention-getting function of school refusal behavior is analogous to the construct of separation anxiety. Moreover, the DSM-IV describes the essential feature of separation anxiety disorder as "developmentally inappropriate and excessive anxiety" (pg. 113). In addition, Tillotson, Roblek and Kearney (1996) found that youngsters with attention-getting school refusal behavior display more general anxiety as shown by the Children's Manifest Anxiety Scale-Revised (RCMAS; Reynolds & Richmond, 1978) and more social anxiety as shown by the Social Anxiety Scale for Children-Revised (LaGreca & Stone,
1993) than youngsters with school refusal behavior due to positive tangible reinforcement. Kearney and Silverman (1993) also report that refusing school for positive tangible reinforcement appears to be analogous to the category of truancy, in which children refuse school for reasons other than fearfulness or anxiety (Hersov, 1985). Therefore, youngsters refusing school for attention likely show more general anxiety as evidenced by scores on the RCMAS compared to youngsters refusing school for positive tangible reinforcement.

Fear

Kearney and Silverman (1993) found that levels of fearfulness were positively correlated with attention-getting behavior. Conversely, Wachtel and Strauss (1994) reported that children who are truant do not experience anxiety or fear when they are at school. Findings suggest that school refusal due to the pursuit of positive tangible reinforcement may be synonymous with truancy. Therefore, the experience of anxiety and fear may not be associated with the pursuit of positive tangible reinforcement as a function of school refusal.

In addition, Tillotson, Roblek, and Kearney (1996) found that youngsters refusing school for attention displayed a significantly higher rate of fear as measured by the Fear Survey Schedule for Children-Revised (FSSC-R, Ollendick, 1983) than youngsters refusing school for
positive tangible reinforcement. Therefore, youngsters refusing school for attention likely show more generalized fear as shown by scores on the FSSC-R than youngsters refusing school for positive tangible reinforcement.

Somatic Complaints

The DSM-IV (APA, 1994) states that separation anxiety disorder is marked by "repeated complaints of physical symptoms (such as headaches, stomachaches, nausea, or vomiting) when separation from major attachment figures occurs or is anticipated" (pg. 113). Because the diagnosis of separation anxiety disorder is common to youngsters who refuse school for attention, it appears that youngsters refusing school for attention likely display somatic complaints.

In contrast, the criteria for the diagnoses of oppositional defiant disorder, conduct disorder, attention-deficit/hyperactivity disorder or no mental disorder does not include complaints of physical symptoms and these diagnoses are common to youngsters who refuse school for positive tangible reinforcement. It appears that youngsters refusing school for positive tangible reinforcement less likely display somatic complaints.

Hersov (1960) found that youngsters with eating disturbance, abdominal pain, nausea, and vomiting were more likely to have school phobia, whereas those with truancy displayed significantly more enuresis, juvenile court
appearance, lying, wandering from home, and stealing. Torma and Halsti (1975) found the incidence of long term somatic and psychosomatic symptoms higher in youngsters with school refusal (34%) than those with truancy (15%). Livingston, Taylor, and Crawford (1988) found that separation anxiety disorder was one of three mental disorders associated with significant numbers of somatic symptoms in a sample of psychiatrically hospitalized children. Specifically, youngsters with separation anxiety displayed more abdominal pain and palpitations.

Moreover, Bernstein, Garfinkel, and Hoberman (1989) found that multiple somatic complaints predicted elevated scores on the Revised Children's Manifest Anxiety Scale (Reynolds & Richmond, 1978). This supports the conclusion that youngsters displaying anxiety, such as those with attention-getting school refusal behavior, are more likely to display somatic complaints. In the current study, higher scores on the RCMAS are thought to be associated with youngsters refusing school for attention, whereas lower scores on the RCMAS are thought to be associated with youngsters refusing school for positive tangible reinforcement.

Familial Environment

Kearney and Silverman (1995), in a study of family environments of youngsters with school refusal behavior, found that children who refuse school for attention were
significantly less independent and displayed more separation anxiety than families of children who refused school for other reasons. It was thought that this type of family was analogous to the enmeshed type. The enmeshed family is thought to consist of an overprotective mother, hostility, excessive dependency between mother and child, and a generally passive and withdrawn father (Johnson et al., 1941; Waldfogel et al., 1957; Suttenfield, 1954; Levanthal & Sills, 1964).

Moreover, families of children who refused school for positive tangible reinforcement were significantly less cohesive than families of children who refused school for other reasons. It was thought that this type of family was analogous to the detached type. The detached family is thought to consist of parents who are not vigilant about their child's needs until they are readily apparent (Foster & Robin, 1989), as well as poor understanding and interaction among family members (Bernstein, Garfinkel, & Borchardt, 1990). In addition, these families were more conflictive than other families in the study.

Therefore, families of youngsters refusing school for attention appear more likely to display an enmeshed family environment as shown by lower scores on the FES "independence" subscale compared to the positive tangible reinforcement group. Families of youngsters refusing school for positive tangible reinforcement appear more likely to display a detached family environment as shown by higher
scores on the FES "independence" subscale compared to the attention-getting group.

Summary of Variables of the Positive Reinforcement Dimension of SRB

In summary, the following profile of variables were hypothesized for the attention-getting function of school refusal behavior: (1) younger age, (2) female, (3) less severe school refusal behavior, (4) diagnosis of separation anxiety disorder, (5) substantial self-reported general anxiety, (6) substantial self-reported fear, (7) substantial self-reported somatic complaints, and (8) low scores on the FES "independence" subscale as compared to the positive tangible reinforcement function.

The following profile of variables were hypothesized for the positive tangible reinforcement function of school refusal behavior: (1) older age, (2) male, (3) more severe school refusal behavior, (4) diagnosis of oppositional/defiant disorder, conduct disorder, or no mental disorder, (5) low self-reported general anxiety, (6) low self-reported fear, (7) low self-reported somatic complaints, and (8) high scores on the FES "independence" subscale as compared to the attention-getting function.
CHAPTER 2

METHOD

Participants

Participants were 129 youngsters (81 males and 48 females) aged 5-17 years and their parents. Mean age was 11.65 years (s.d. = 3.03). Seventy-nine (87%) of the youngsters were Caucasian, six (7%) were Hispanic, and five (6%) were African-American. Data were not available on 38 participants regarding race. These youngsters missed an average of 30.83% (s.d. = 28.49) of school days. Average annual household income was $27,000 (s.d. = 24,650). Twenty-eight (47%) of the children came from a single-parent household, whereas thirty-two (53%) came from a dual-parent household. Data were not available for 69 participants regarding single- or dual-parent household. These youngsters and their parents were referred by school officials or themselves to a child school refusal or anxiety disorders clinic. These youngsters were screened and accepted for the study if their school refusal behavior was determined to be the primary problem (e.g., not secondary to depression) and if their school refusal behavior was primarily maintained by positive reinforcement. These
youngsters met criteria for a variety of mental disorders, and one-quarter met criteria for no mental disorder. Youngsters were recruited from the School Refusal Clinic in Las Vegas, Nevada, and the Center for Stress and Anxiety Disorders in Albany, New York.

**Instruments**

**School Refusal Assessment Scale (SRAS).** The SRAS (Kearney & Silverman, 1993) is a 16-item self-report instrument designed to assess the relative influence of four motivating conditions that serve to maintain school refusal behavior (i.e., avoidance of stimuli provoking negative affectivity, escape from aversive social/evaluative situations, attention, and positive tangible reinforcement). This scale is the criterion on which the other measures were used to predict dimensions of positively reinforced school refusal behavior. Both parent (SRAS-P) and child (SRAS-C) versions of the scale are available. Each item is scored on a 7-point Likert-type scale from 0 (never) to 6 (always). Four questions correspond to each condition, and means for each condition are computed and ranked. The highest ranked function is considered to be the primary maintaining variable of school refusal behavior for a particular child. Three rankings of the function of school refusal behavior were collected for each child. These rankings were based on child self-report, parent report, and a composite ranking based on the average of these two.
Kearney and Silverman (1993) reported good test-retest (child, .71 and parent, .70) and interrater reliability (.63; Kearney & Silverman, 1988, 1993) for the SRAS. Moreover, the scale has been preliminarily shown to possess treatment validity and to maximize treatment outcome through highly specific, individualized, and prescriptive treatment modalities (Kearney & Silverman, 1990).

**Anxiety Disorders Interview Schedule (ADIS).** The ADIS (Silverman & Nelles, 1988) is a semi-structured diagnostic interview based on DSM-IV criteria. Both parent (ADIS-P) and child (ADIS-C) versions of the interview are available. The interview is subdivided into various DSM disorders, and specific questions are provided based on the diagnostic criteria for each disorder. From these questions, a parent, child, and a composite diagnosis are obtained.

Silverman and Nelles (1988) reported moderate to high reliability estimates for the ADIS. Overall kappa coefficients were reported for the ADIS-C (.84), the ADIS-P (.83), and composite diagnoses (.78). In a subsequent study, test-retest reliability was examined over a 14-day period. An overall Kappa of .75 for composite diagnosis was found (Silverman & Eisen, 1992).

**Fear Survey Schedule for Children (FSSC-R).** The FSSC-R (Ollendick, 1983) is an 80-item self-report instrument used to measure overall fearfulness. Children are asked to rate their fear for each item on a 3-point scale (none, some, or a lot). Total score was used in this study. Ollendick and
Mayer (1984) reported that the FSSC-R discriminated between "school phobic" children whose fears were related to separation anxiety and children whose fears were related to specific aspects of the school situation itself. In addition, Last, Francis, and Strauss (1989) reported findings that fear of similar items is related to differential diagnosis of school refusal, separation anxiety disorder, and overanxious disorder. Ollendick (1983) reported that the measure possesses good reliability (coefficient alpha, .95) and internal consistency (coefficient alpha, .94).

Revised Children's Manifest Anxiety Scale (RCMAS). The RCMAS (Reynolds & Richmond, 1978) is a 37-item questionnaire with a yes/no format. The RCMAS contains 28 anxiety items and 9 Lie scale items. The anxiety items assess three dimensions of general anxiety in 6- to 19-year-olds: physiological, worry/oversensitivity, and concentration. Total score was used in this study.

Reynolds and Richmond (1978) reported reliability estimates at .83 for the RCMAS with an item selection sample and .85 with a cross-validation sample. Finch, Montgomery, and Deardoff (1974) and Allison (1970) report similar estimates. Moreover, an item analysis conducted by Reynolds and Richmond found internal consistency estimates in the mid to upper .80s. Test-retest reliability of .68 over nine months for a group of elementary school children was also reported. Reynolds and Richmond found a correlation of .85
between the RCMAS total anxiety score and the State-Trait Anxiety Inventory for Children (STAIC). This supports the RCMAS as a valid measure of general anxiety.

*Family Environment Scale* (FES). The FES (Moos & Moos, 1986) is a 90-item true-false inventory completed by the parents. The FES assesses three dimensions of the family environment: interpersonal relationships among family members, personal growth, and organizational structure of the family. Ten subscales of family functioning are subsumed under these three dimensions: achievement, active-recreational, cohesion, conflict, control, expressiveness, intellectual-cultural, independence, moral-religious emphasis, and organization. The independence subscale (i.e. assertiveness, self-sufficiency, and independent decision making) was used in this study. Raw scores are converted to standard scores that have a mean of 50. Scores above 55 and below 45 are considered to be aberrant in nature.

Moos and Moos (1986) reported their scale to be internally consistent (KR20 = .61 to .78) and reliable over a 12-month period (.52 to .89). Bloom (1985) reported moderate internal consistency for 8 of the 10 subscales, ranging from .65 to .85. Additionally, Ollendick, La Berteaux, and Howe (1978) reported significant correlations between FES subscales and factors of the Parental Attitude Research Instrument (Schaefer & Bell, 1958), thus supporting the concurrent validity of the FES.
Procedure

Parents of youngsters referred for the primary problem of school refusal behavior participated in an initial interview. Consent forms were issued to parents and children and issues of confidentiality regarding all information collected during the course of the study were discussed.

Consent forms were signed, parents completed the parent version of the School Refusal Assessment Scale, the Family Environment Scale, and a demographic sheet. As the parents completed this information, the youngsters were interviewed via the child version of the Anxiety Disorders Interview Schedule.

Next, the parents were interviewed via the parent version of the Anxiety Disorders Interview Schedule while the youngster completed the child version of the School Refusal Assessment Scale, the Fear Survey Schedule for Children, and the Revised Children's Manifest Anxiety Scale. The entire data collection process for each family took approximately two hours. This process was part of an overall assessment protocol and research project regarding this population. The current study was reapproved by the IRB on 11/06/96, #113f1196-118.
 CHAPTER 3

RESULTS

Data Analyses

Three multivariate analyses of variance (MANOVA) were performed on eight dependent variables: age, gender, severity of school refusal behavior, diagnosis, general anxiety, fear, somatic complaints, and family environment. Independent variables were functions of school refusal behavior (attention-getting versus positive tangible reinforcement) based on the highest-ranked child, parent, and composite functions from the SRAS.

Subsequently, one-way analyses of variance (ANOVAs) were performed for each relevant dependent variable. These analyses were adjusted using a Bonferroni correction because the number of variables may have inflated the Type I error rate. The adjusted value for significance is .006 for eight variables and .005 for nine variables. To further support these findings, three discriminant function analyses were performed using the highest-ranked child, parent, or composite functions of SRB. Age, gender, severity of school refusal behavior, diagnosis, general anxiety, fear, somatic complaints, and family environment were used as predictors.
Child and parent SRAS rankings matched 25% of the time for the attention-getting function. Child and parent SRAS rankings matched 43% of the time for the positive tangible reinforcement function. Parent and composite SRAS rankings matched 55% of the time for the attention-getting function. Parent and composite SRAS rankings matched 67% of the time for the positive tangible reinforcement function. Child and composite SRAS rankings matched 42% of the time for the attention-getting function. Child and composite SRAS rankings matched 69% of the time for the positive tangible reinforcement function. Percent agreement was calculated by counting the number of times each relevant ranking coincided and dividing that number by the total number of cases.

Part I: Multivariate Analysis of Variance

Child-derived results. With respect to child reports, multivariate analysis of variance revealed a significant difference, $F (1, 22) = 6.15, p < .0001$, between the attention-getting and positive tangible reinforcement groups on the combined dependent variables using Wilks' criterion. As can be seen in Table 1, analyses of variance yielded no significant differences with respect to gender, severity of school refusal behavior, or level of independence in the family. However, analysis of variance did yield a significant difference, $F (1, 53) = 17.435, p < .0001$, with respect to age. That is, children who refused school for attention tended to be younger than children who refused
school for positive tangible reinforcement. A significant difference, \( F (1,53) = 13.627, p < .001 \), was also found with respect to child-derived diagnoses of separation anxiety. Children whose report led to a diagnosis of separation anxiety disorder were significantly more likely to refuse school for attention than positive tangible reinforcement.

In addition, trends were found with respect to levels of anxiety and fear, \( F (1,53) = 7.244, p < .009 \), \( F (1,53) = 4.968, p < .030 \), respectively. That is, children who refused school for attention tended to report more anxiety, somatic complaints, and fear than children who refused school for positive tangible reinforcement. A trend was also evident with respect to child-derived presence or absence of any mental disorder \( F (1,53) = 5.133, p < .028 \). Children who refused school for attention tended to be diagnosed with mental disorders more often than children who refused school for positive tangible reinforcement.

**Parent-derived results.** With respect to parent reports, multivariate analysis of variance revealed a significant difference, \( F (1,14) = 3.41, p < .005 \), between the attention-getting and positive tangible reinforcement groups on the combined dependent variables using Wilks' criterion. As can be seen in Table 1, analyses of variance yielded no significant differences with respect to gender, severity of school refusal behavior, level of anxiety or somatic complaints, or independence in the family. However, analysis of variance did yield a significant difference, \( F \).
(1, 39) = 18.094, $p < .0001$, with respect to age. That is, children who refused school for attention tended to be younger than children who refused school for positive tangible reinforcement. A significant difference, $\chi^2 (1, 39) = 19.351, p < .0001$, was also found with respect to parent-derived diagnoses of separation anxiety. Children who met criteria for separation anxiety disorder based on parent reports were significantly more likely to refuse school for attention than positive tangible reinforcement. A significant difference was also found with respect to fear, $\chi^2 (1, 39) = 17.513, p < .0001$. Children who refused school for attention, as reported by their parents, displayed higher levels of fear than children who refused school for positive tangible reinforcement.

A trend was found, $\chi^2 (1, 39) = 4.876, p < .033$, with respect to parent-derived diagnoses of oppositional/defiant or conduct disorder. According to parent reports, children who refused school for positive tangible reinforcement tended to be diagnosed with oppositional/defiant or conduct disorder more often than children who refused school for attention.

**Composite-derived results.** With respect to child and parent composite reports, multivariate analysis of variance revealed a significant difference, $F (1, 46) = 5.86, p < .0001$, between the attention-getting and positive tangible reinforcement groups on the combined dependent variables using Wilks' criterion. As can be seen in Table 1, analysis
of variance between the groups yielded no significant differences with respect to gender, severity of school refusal behavior, or level of independence in the family. However, analysis of variance did yield a significant difference, $F(1, 46) = 28.409, p < .0001$, with respect to age. That is, children who refused school for attention tended to be younger than children who refused school for positive tangible reinforcement. A significant difference, $F(1, 46) = 21.104, p < .0001$, was also found with respect to composite-derived diagnoses of separation anxiety. Children with composite-derived diagnoses of separation anxiety were significantly more likely to refuse school for attention than positive tangible reinforcement. Significant differences, $F(1, 46) = 16.993, p < .0001, F(1, 46) = 25.148, p < .0001$, were also found with respect to levels of anxiety and fear. Children who refused school for attention displayed significantly higher levels of anxiety, somatic complaints, and fear than children who refused school for positive tangible reinforcement.
Table 1

Means of discriminant variables for attention-getting (F3) and positive tangible reinforcement (F4) functions derived from child, parent, and composite reports.

<table>
<thead>
<tr>
<th></th>
<th>Child F3</th>
<th>F4</th>
<th>Parent F3</th>
<th>F4</th>
<th>Composite F3</th>
<th>F4</th>
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<tbody>
<tr>
<td>Age</td>
<td>9.20</td>
<td>12.90**</td>
<td>9.20</td>
<td>13.31*</td>
<td>8.81</td>
<td>13.28*</td>
</tr>
<tr>
<td>Gender</td>
<td>1.33</td>
<td>1.30</td>
<td>1.40</td>
<td>1.19</td>
<td>1.44</td>
<td>1.28</td>
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<tr>
<td>Percentage</td>
<td>40.20</td>
<td>24.35</td>
<td>30.13</td>
<td>26.46</td>
<td>28.06</td>
<td>25.81</td>
</tr>
<tr>
<td>Sep. Anxiety</td>
<td>0.47</td>
<td>0.08**</td>
<td>0.53</td>
<td>0.04*</td>
<td>0.56</td>
<td>0.06*</td>
</tr>
<tr>
<td>Opp/Defiant</td>
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<td></td>
<td>0.13</td>
<td>0.46</td>
<td>0.13</td>
<td>0.38</td>
</tr>
<tr>
<td>Presence</td>
<td>0.53</td>
<td>0.23</td>
<td>0.73</td>
<td>0.73</td>
<td>0.69</td>
<td>0.66</td>
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<td>RCMAS</td>
<td>14.67</td>
<td>9.58</td>
<td>13.27</td>
<td>9.96</td>
<td>16.44</td>
<td>8.81*</td>
</tr>
<tr>
<td>FES/IND</td>
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<td>44.23</td>
<td>42.67</td>
<td>45.89</td>
<td>40.06</td>
<td>44.63</td>
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<td>FSSC-R</td>
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<td>113.68</td>
<td>139.07</td>
<td>110.15*</td>
<td>143.69</td>
<td>109.38*</td>
</tr>
</tbody>
</table>

*p < .005

**p < .006
Part II: Discriminant Function Analysis

Child-derived results. A discriminant function analysis based on child reports indicated a strong association between groups and predictors, $\chi^2(8) = 35.61, p < .0001$. The discriminant function revealed that 72% of the total variance is accounted for by the combined predictors. Child-derived diagnoses of separation anxiety and age were the best predictors for distinguishing the two groups. Standardized canonical discriminant function coefficients were .78400, .52047, -.75696, -.83684, .49589, -.41203, .10020, and .11755 for age, gender, severity of SRB, diagnosis of separation anxiety, presence of a mental disorder, level of generalized anxiety, level of fearfulness, and level of independence in a family, respectively.

Parent-derived results. A discriminant function analysis based on parent reports indicated a strong association between the groups and predictors, $\chi^2(9) = 23.76, p < .005$. The discriminant function revealed that 71% of the total variance is accounted for by the combined predictors. Parent-derived diagnoses of separation anxiety, age, and level of self-reported fear were the best predictors for distinguishing the two groups. Standardized canonical discriminant function coefficients were -.24073, -.22677, .27119, .60345, -.23221, -.23822, -.16101, .57212, and -.14841 for age, gender, severity of SRB, diagnosis of separation anxiety, diagnoses of oppositional/defiant and
conduct disorder, presence of a mental disorder, level of generalized anxiety, level of fearfulness, and level of independence in a family, respectively.

**Composite-derived results.** A discriminant function analysis based on child and parent composite reports indicated a strong association between the groups and predictors, \( \chi^2(9) = 36.11, p < .0001 \). The discriminant function revealed that 76% of the total variance is accounted for by the combined predictors. Composite-derived diagnoses of separation anxiety, age, and level of self-reported fear were the best predictors for distinguishing the two groups. Standardized canonical discriminant function coefficients were -.48638, -.28044, .36923, .53566, .23256, -.62200, .45884, .34658, and -.04994 for age, gender, severity of SRB, diagnosis of separation anxiety, diagnoses of oppositional/defiant and conduct disorder, presence of a mental disorder, level of generalized anxiety, level of fearfulness, and level of independence in a family, respectively.
CHAPTER 4

DISCUSSION

The present study empirically investigated child and family variables associated with the positive reinforcement dimension of school refusal behavior, which includes attention-getting and positive tangible reinforcement. Also, potential predictors were identified that may be helpful in linking assessment strategy with prescriptive treatments. Results generally supported the stated hypotheses and previous findings in the literature. Data from MANOVA revealed significant differences in several variables across different reports.

With respect to child-derived reports, significant differences were found between the attention-getting and positive tangible reinforcement groups with respect to age and diagnosis. Specifically, children who refused school for attention were younger and displayed more diagnoses of separation anxiety than children who refused school for positive tangible reinforcement.

With respect to parent-derived reports, significant differences were found between the attention-getting and
positive tangible reinforcement groups with respect to age, diagnosis, and level of self-reported fear. Specifically, children who refused school for attention were younger, displayed more diagnoses of separation anxiety, and had more self-reported fear than children who refused school for positive tangible reinforcement.

With respect to composite-derived reports, significant differences were found between the attention-getting and positive tangible reinforcement groups with respect to age, diagnosis, level of self-reported general anxiety, level of self-reported fear, and level of self-reported somatic complaints. Specifically, children who refused school for attention were younger and displayed more diagnoses of separation anxiety, more self-reported general anxiety, more self-reported fear, and more self-reported somatic complaints than children who refused school for positive tangible reinforcement.

Overall, children who refused school for attention were younger and displayed more diagnoses of separation anxiety than children who refused school for positive tangible reinforcement. These differences were consistent across child-, parent-, and composite-derived functions. These findings suggest that age and diagnosis of the child are affiliated with the attention-getting and positive tangible reinforcement function of school refusal behavior regardless of the source of the report. Results also showed some inconsistencies across child-, parent-, and composite-
derived functions. For example, significant differences were found for self-reported fear based on parent- and composite-derived reports but not child-derived reports. This finding may be attributable to parents who overreport child fearfulness and/or children who underreport such fearfulness. Also, small sample size may account for the inconsistent findings.

Additionally, significant differences were found for self-reported general anxiety and self-reported somatic complaints based on composite- but not parent- or child-derived reports. These inconsistent findings suggest that the composite-derived function may be a more accurate indicator of group membership than either the parent- or child-derived function alone. Small sample size may account for these inconsistent findings as well.

Data from MANOVA revealed no significant differences between the attention-getting and positive tangible reinforcement groups with respect to gender, severity of school refusal behavior, and level of independence in the family. These findings were consistent across child-, parent-, and composite-derived functions. Several possible reasons for these results exist. With respect to gender, this study used a sample of children with general school refusal behavior, whereas previous literature, on which this study's hypotheses were based, focused primarily on children who had school phobia. Therefore, gender differences may exist for children with specific school phobia but not
children with general school refusal behavior. With respect to severity of school refusal behavior, it may be that children who refuse school for positive tangible reinforcement miss more days than those who refuse school for attention. However, percentage days missed would be the same. Therefore, a more accurate measurement might be time of referral. With respect to level of independence in the family, parents may have responded to items on the FES in a socially desirable manner, thus minimizing differences between the two groups. In addition, significant differences may not have been found because the sample was too small. Future studies with more participants may reveal differences in these child and family variables. Lastly, significant differences may not have been found because there may not be any differences between the groups.

Assessment Recommendations

Based on the results from this study, several recommendations can be made with respect to the assessment of school refusal behavior (SRB). It seems clear from the findings that clinicians should determine the function of SRB by assessing both the parents and child. A composite function based on the highest-ranked parent and child function would be most beneficial for predicting group membership. Children should be assessed separately and first. This is helpful to assure the child that his/her input will be taken seriously, to discuss confidentiality,
and to establish rapport. Following a discussion with the child, an interview with the parents to gather additional information would be invaluable.

As seen in this study, some variables are more important in determining the function of school refusal behavior than others. As a result, clinicians are encouraged to carefully evaluate age, diagnosis, level of generalized anxiety, level of somatic complaints, and level of fear during assessment of children with SRB. These variables will be useful in tailoring a prescriptive treatment strategy to suit the child's particular symptoms. For example, a 7-year-old child who has been diagnosed with separation anxiety and who shows high levels of anxiety and fear will be more likely to refuse school for attention than positive tangible reinforcement. Based on this profile of variables, this child may then be assigned a prescriptive treatment strategy.

Because age, diagnosis, generalized anxiety, somatic complaints, and fear played a major role in distinguishing children who refused school for attention from children who refused school for positive tangible reinforcement, assessment techniques that focus on these variables would seem appropriate. To gather information on parent, child, and composite diagnoses, one of several structured interviews may be appropriate. These structured interviews include the Anxiety Disorders Interview Schedule for Children (ADIS-C; Silverman & Nelles, 1988), Diagnostic
Interview Schedule for Children (DISC; Herjanic & Reich, 1982), and the Interview Schedule for Children (ISC; Kovacs, 1985). For the current study, the ADIS proved beneficial in distinguishing between the groups with respect to separation anxiety disorder and enabled information to be collected from both parents and children.

As evidenced in the current study, it is important to assess level of generalized anxiety, somatic complaints, and fear when determining the function of school refusal behavior. Therefore, self-report measures, parent and teacher ratings, behavioral observations, and psychophysiological assessments designed to assess these variables can be recommended.

With respect to self-report measures, the Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1978), State-Trait Anxiety Inventory (STAIC; Spielberger, 1973), and Child Anxiety Sensitivity Index (CASI; Silverman, Fleisig, Rabian & Peterson, 1991) would be helpful in determining anxiety proneness in children with school refusal behavior. To assess somatic complaints, the RCMAS and CASI may be particularly beneficial because they measure physiological symptoms and negative reactions to physical symptoms, respectively. Clinicians are advised to assess fear using the Fear Survey Schedule for Children-Revised (FSSC-R; Ollendick, 1983). As seen in the current study, this measure is particularly useful for determining the level of fear in children with school refusal behavior.
Parent ratings are also important sources of information, as this study indicated. They help collaborate reports given by children and provide the clinician with a broader context for determining the function of school refusal behavior. The Child Behavior Checklist (CBCL; Achenbach, 1991) and Louisville Behavior Checklist Fear Questionnaire (LBCFQ; Miller, Barrett, Hampe, & Noble, 1971) may be recommended for these purposes. The CBC is a parent rating measure designed to assess both externalizing and internalizing behavior problems based on gender profiles. In addition, a teacher version is available that may be important in identifying the function of SRB and for tracking a child's progress during treatment. The LBCFQ is a parent rating measure of a child's dependency needs, specific fears, and generalized anxiety.

In addition to parent reports, it would be important to directly observe parent-child interactions to better understand how and why a child is refusing school. For children thought to be refusing school for attention, clinicians should be watchful for (a) persistent, close physical proximity between parent and child, (b) manipulation of parents' behavior by excessive crying, trembling, and/or show of fear, and (c) continuous parental assent to child somatic complaints. For children thought to be refusing school for positive tangible reinforcement, clinicians should be watchful for (a) manipulation of parents' behavior by arguing forcefully, (b) continuous
refusal by the child to do what is asked by the parent, and (c) lack of behaviors such as crying, trembling, and/or reports of fear (Kearney & Silverman, 1996).

In addition to the behavioral observations mentioned above, experimental procedures may be implemented to better assess the functional condition. For a child thought to be refusing school for attention, separate baseline periods could be compared on days when (a) a parent or caregiver attends school with the child, or (b) a clinician takes the child to school or the child goes to school by his/herself. Significant differences would indicate that the child is refusing school for attention. In contrast, for a child thought to be refusing school for positive tangible reinforcement, separate baseline periods could be compared on days when (a) the child attends school on his/her own terms, or (b) the child is given increased rewards for school attendance and disallowed activities following school nonattendance (Kearney & Silverman, 1996). Significant differences would indicate that the child is refusing school for positive tangible reinforcement.

Psychophysiological assessments may also be recommended when assessing a child's function for refusing school. These assessments could prove useful because children with SRB may answer self-report instruments in a socially desirable manner and/or deceive the clinician during behavioral observations. However, feigning heart rate or sweat gland activity would prove difficult (Eisen & Kearney,
1995). Level of generalized anxiety and fear could be assessed for children refusing school for attention by using these types of assessments. For example, many investigators (Eisen & Silverman, 1991; Eisen & Silverman, 1994; Beidel, 1988) have found that physiological correlates are associated with anxious emotions. Once the variables of age, diagnosis, generalized anxiety, somatic complaints, and fear are assessed, clinicians should have a good idea of the function of school refusal behavior as well as a profile of associated behaviors.

Based on this study, some variables are not helpful in distinguishing attention-getting from positive tangible reinforcement functions of school refusal behavior. These include gender, severity of school refusal behavior, and level of independence in the family. With respect to gender, a clinician may suspect that a child is refusing school for attention if the child is female more so than if the child were male. Results of this study indicate that this would be a mistake. Gender seems to be unrelated to function when dealing with a sample such as the one in this study.

With respect to severity of school refusal behavior, results indicated that the function of school refusal behavior cannot be determined by the percentage of school days missed during a particular time period because the number of days missed may appear the same when in fact they are different. For example, if data were collected early in
the school year, the positive tangible reinforcement group may be missing more days but the percentage days missed would be the same as those who refused school for attention. Therefore, clinicians should be wary of this and evaluate whether time in school may be masking the "real" function.

With respect to level of independence in the family, results of this study indicated that function cannot be determined by examining parent self-report of family environment. Therefore, observing parent-child interactions may be more valuable than parent or child reports of their behavior in the family.

**Treatment Recommendations**

Based on results from this study, several recommendations are made with respect to the treatment of SRB. Because younger age, and greater separation anxiety disorder, generalized anxiety, somatic complaints, and fear play a major role in the development and maintenance of attention-getting school refusal behavior, treatment strategies that focus on the parent and the child would seem appropriate. To minimize a child's anxiety, somatic complaints, and fear, children may be trained in relaxation techniques. Children can be taught to tense and release various muscle groups (e.g., hands, face, stomach) or engage in breathing retraining. Here, the child is taught to control hyperventilation by breathing deeply and slowly during fearful or anxious situations. Clinicians could also
teach older children to use positive self-statements such as "I know I can go to school today without crying." These techniques help reassure children and teach them that they have some control over how they feel and behave (Eisen & Kearney, 1995).

Results indicated that separation anxiety disorder is common in children who refuse school for attention. Therefore, treatment strategies that target fear of separation would be beneficial. For example, clinicians may wish to teach parents behavior management skills such as establishing morning routines. A child may be required to complete certain tasks or spend quality time with a parent before school to help ease the separation. Also, parents may be encouraged to model appropriate nonanxious behavior before separating from their child.

Because older age and less separation anxiety disorder, generalized anxiety, somatic complaints, and fear play a major role in the development and maintenance of positive tangible reinforcement based school refusal behavior, treatment strategies that focus on the family seem optimal. For example, family members can be trained in contingency contracting. First, family members define a specific problem and devise a list of possible solutions. The lists of solutions are then compared and one solution is chosen. Tangible rewards and punishers are then provided for implementing or not implementing the solution, respectively. Eventually, parents can be encouraged to write a contract
that focuses on the child's school refusal behavior (Kearney & Roblek, in press).

Clinicians should keep in mind that the previous treatment recommendations are general and should be used in conjunction with additional treatment strategies such as role playing, cognitive restructuring, modeling, exposure and social skills training based upon the child's specific symptom profile. For example, a child who is refusing school for positive tangible reinforcement may also display a substantial level of anxiety. In this case, relaxation training may be utilized in addition to contingency contracting. Another child who is refusing school for attention may display a low level of anxiety, a high level of fear and oppositional/defiant behavior. In this case, relaxation training and contingency management may be more appropriate.

Limitations of Current Research and Future Recommendations

The current study, though one of the first of its kind, has several limitations. First, sample size was small, so differences may not have been revealed where they truly existed. Future research with more participants is necessary and could reveal a different picture with respect to gender, severity of school refusal behavior, and family dynamics in children with SRB. Second, the sample was potentially biased in that only children who were referred
by school officials or parents to a child school refusal or anxiety disorders clinic were evaluated. Future research could solicit a more representative group of children to participate. Third, the current study used eight variables to determine the differences between attention-getting and positive tangible reinforcement functions of school refusal behavior. Including a large number of variables in the study may have decreased statistical power.

Future researchers should further explore the use of a composite report consisting of child and parent reports to determine (1) if the function is consistent with and representative of the child and parent reports, and (2) why the positive tangible reinforcement function compared to the attention-getting function as reported by both child and parent correlate more highly with the composite report. Future researchers should also investigate the other two functional conditions (avoidance of specific or general stimuli provoking negative affectivity and escape from aversive social/evaluative situations) using the same variables as the current study to develop a cohesive classification system with empirically-derived subtypes and associated behaviors.

Because depression, self-esteem, and familial environment may be important to all four functional conditions of school refusal behavior, these variables should be investigated in a future study as well. Lastly, it is suggested that this sample be followed over time to
determine the effectiveness of any treatment received based on the functions that were assigned. It would also be interesting to empirically investigate the effectiveness of each prescriptive treatment strategy based on the highest-ranked child, parent, and composite functions to determine the most accurate report.

Summary and Conclusions

This study is one of the first to empirically investigate age, gender, severity of school refusal behavior, level of generalized anxiety, type of diagnosis, level of somatic complaints, level of fearfulness, and type of familial environment associated with the positive reinforcement dimension of school refusal behavior, which includes attention-getting and positive tangible reinforcement. Results indicated that children who refused school for attention were younger and displayed more diagnoses of separation anxiety, self-reported anxiety, self-reported somatic complaints, and self-reported fear than children who refused school for positive tangible reinforcement. Results also suggest that a composite function based on highest-ranked child and parent function is a more accurate indicator of attention-getting and positive tangible reinforcement functions of SRB than parent and child function alone.

This study indicates that, by assessing age, diagnosis, level of anxiety, level of somatic complaints, and level of
fear from parent and child reports, one could generally predict the function of school refusal behavior (attention-getting, positive tangible reinforcement). Once these five variables are assessed, clinicians would have a good idea of the function and treatment strategy most appropriate for a particular child.

Children who refused school for attention did not differ with respect to oppositional/defiant behavior or number of mental disorders. These findings indicate that these two groups may be more alike than previous literature suggests. Many classification systems subtype children based on a few characteristics believed to differentiate between groups and assign treatment accordingly (Coolidge, Hahn, & Peck, 1957; Kennedy, 1965, 1971). However, a classification system like the one suggested in the current study, which tailors treatment based on a profile consisting of highest-ranked function and supported by specific parent and child characteristics (i.e., age, diagnosis, level of generalized anxiety, somatic complaints, and fear), seems more useful for classifying, assessing, and treating school refusal behavior.
REFERENCES


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