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A Survey of Illinois Speech-Language Pathologists and School Psychologists Regarding Selective Mutism

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Eastern Illinois University

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A Survey of Illinois Speech-Language Pathologists and
School Psychologists Regarding Selective Mutism
(TITLE)

BY

Sarah Megan Toland

THESIS

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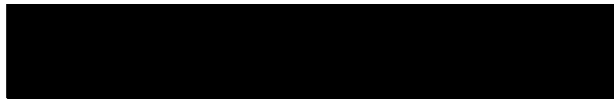
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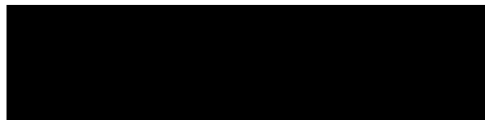
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A Survey of Illinois Speech-Language Pathologists and
Psychologists

Regarding Selective Mutism

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Abstract

A questionnaire was designed by the examiner to identify the views and knowledge of Illinois school psychologists and speech-language pathologists regarding selective mutism. Subjects consisted of 119 school psychologists and 106 speech-language pathologists, who completed the questionnaire.

The results of the survey revealed that both Illinois school psychologists and speech-language pathologists viewed themselves as partially responsible for the assessment and treatment of selective mutism, however, both samples indicated low levels of comfort in their ability to successfully provide those services. Additionally, very few of the respondents in either group had received formal training in the area of selective mutism.

Results were evaluated to determine if significant differences existed between the groups based on the examiner's questions. Significant differences were not found between the groups in regards to professional responsibility, treatment options, differential diagnosis, or associated and observed characteristics. Opportunities for formal training are necessary for the members of both professions to increase their understanding of and confidence in working with children who have selective mutism.

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Chapter 1

Review of LiteratureIntroduction

For many pre-school and kindergarten children the first day of school can be stressful and traumatic. New students are separated from their families, exposed to a different environment, unfamiliar people, and new responsibilities. Early elementary school teachers are accustomed to dealing with shy quiet pupils for the first few weeks, hoping that in time, children will adapt to the situation and become more expressive. However, for a small handful of children, this does not occur. These children may be experiencing a condition referred to as selective (elective) mutism. This term is used to describe children who refuse to speak in almost all social situations, including school, despite possessing the ability to express themselves verbally and comprehend language.

The disorder can be devastating to a child's academic, social, and emotional well-being and development. For years, the psychological community has searched for answers to the mystery of selective mutism with varied success. Countless researchers have offered insights into the causes and treatments of selective mutism (Atoynatan, 1986, & Black & Uhde, 1995). Despite the inventory of published case studies (Cunningham, Catoldo, Mallion, & Keyes, 1984, & Krohn, Weckstein, & Wright, 1992), a

systematic approach to assessment and treatment has not yet been accepted.

History

Selective Mutism was first described in the late 19th Century by the German physician, Kussmaul (1877). Kussmaul named the disorder in which people would not speak in certain situations, despite the ability to speak, "aphasia voluntaria." The chosen name emphasized the belief that it was a voluntary decision not to speak (as cited in Dow, Sonies, Scheib, Moss, & Leonard, 1995). In 1931, Froeschels, Jellinek, and Travis reported similar characteristics, but failed to classify them as a specific disorder. Three years later, Swiss pioneer of child psychiatry, Mortiz Tramer, observed the same symptoms. He identified the characteristics as "elective mutism," with the belief that children were "electing" not to speak in selected settings and with selected people (as cited in Harris, 1996).

According to the most recent edition of the Diagnostic and Statistic Manual of Mental Disorders (1994), the disorder has been termed "selective mutism", implying the children do not speak in "select situations" (Dow et al., 1995). Von Misch (1952) observed the following five characteristics consistently in four clinical case studies: (1) environmental factors may precipitate mutism; (2) mutism often occurred at the time the child entered school; (3) the disorder was psychogenic in origin;

(4) the selection of mutism as a symptom was related to a traumatic experience at the time the child was developing speech; and (5) dependence upon the mother was excessive (as cited in Lazarus, Gavilo, & Moore, 1983).

Definition of the Disorder

Regardless of the chosen label, the diagnosis for selective mutism hinges on one primary symptom: "consistent failure to speak in specific social situations...despite speaking in other situations" (American Psychiatric Association, 1994 p. 115). The current criteria for selective mutism according to the DSM-IV are as follows:

- 1) Consistent failure to speak in specific social situations (in which there is an expectation for speaking, e.g., at school) despite speaking in other situations.
- 2) The disturbance interferes with educational or occupational achievements or with social communication.
- 3) The duration of the disturbance is at least one month (not limited to the first month of school).
- 4) The failure to speak is not due to a lack of knowledge of, or comfort with, the spoken language required in the social situations.
- 5) The disturbance is not better accounted for by a communication disorder (e.g., stuttering) and does not occur exclusively during the course of a pervasive developmental disorder, schizophrenia, or other psychotic disorder (American Psychiatric Association, 1994 p.115).

Differential Diagnosis

It is important to note that speech inhibition can be a secondary symptom of many psychiatric disorders (including

pervasive developmental disorders, schizophrenia, and severe mental retardation) making differential diagnosis for selective mutism very complex. Individuals with any of the aforementioned psychological problems may be unable to speak appropriately in social situations. Individuals with selective mutism, however, have an established ability to speak in some social situations. It is necessary to distinguish selective mutism from other communication disorders such as a phonological disorder, an expressive language disorder, a mixed receptive-expressive language disorder, or stuttering. Unlike selective mutism, these disorders are present in all speaking situations (American Psychiatric Association 1994, p. 115).

Incidence

Selective mutism has been classified as a rare disorder affecting fewer than 1% of school age children (Richard, 1983). It has been documented that estimates obtained during the first weeks of school are often inflated and thus misrepresentative of the actual number of cases. The accepted prevalence ranges between .3-.8 per 1,000 (Wright, Miller, Cook, & Littmann, 1985).

Age of Onset and Referral

Although age of onset is typically between 3 and 5 years of age, the average age of referral and diagnosis may not occur until age 6-7. This discrepancy may be attributed to the fact that symptoms often go unnoticed until the child enters

school (Krohn, Weckstein, Sander, & Wright, 1992).

Associated Features

Several psychological and personality characteristics are reported to be associated with this disorder. They include excessive shyness, fear of social embarrassment, social isolation, impulsive and compulsive traits, negativism, oppositional/controlling behavior, and passive aggressive behaviors (Giddan, Ross, Sechler, & Becher, 1997). Additional factors that may be found in individuals diagnosed as selectively mute could be mental retardation, speech disorders, hospitalization/trauma before the age of three, maternal overprotection, parental conflict, and family immigration/isolation (Wright et al., 1995).

Subtypes of Selective Mutism

Hayden (1980) subdivided selective mutism into four types, based on the differing characteristics of 68 diagnosed children (as cited in Baltaxe, 1994). The largest group, termed symbiotic mutism, demonstrated a strong symbiotic relationship with a caregiver, usually the mother. Typically one parent dominated the relationship with other members of the family, including the mute child, and often discouraged the child's effort to establish other relationships. Children in this category tended to be negativistic and highly manipulative (Baltaxe, 1994; Chess & Hassibi, 1978).

Hayden (1980) stated that reactive mutism was the result of single or multiple events precipitating silence, such as a rape or death in the family. This type of mutism was associated with a variety of emotional reactions, such as anxiety, depression, and social withdrawal (Chess & Hassibi, 1978).

Children exhibiting hostile attitudes and antisocial behavior used silence as a weapon. Hayden termed this subset, passive-aggressive mutism. The children expressed hostility by a defiant refusal to speak; the mutism was part of their passive aggressive mode of interaction with their human environment (Chess & Hassibi, 1978 and Harris, 1996).

The fourth subtype was known as speech phobic. Only 7 of the 68 subjects in Hayden's study demonstrated this type of mutism. These individuals showed fear when hearing their own voices and had symptoms of an obsessive nature, such as frequent ritualistic behaviors. Hayden hypothesized that family secrets might be revealed and the children might feel unable to control their speech regarding certain matters (as cited in Baltaxe, 1994 and Harris, 1996).

Kolvin and Fundudis (1981) described two types of "psychological" mutism, in contrast to "biological" mutism. The latter would include mutism associated with profound deafness, serious mental disorder, or infantile autism (as cited in Harris, 1996). Traumatic mutism, characterized by sudden onset

immediately following a psychological or physical shock, was considered to be a hysterical phenomenon. The second type is selective mutism. Compared to Hayden's classifications, "traumatic mutism is the same as reactive mutism, and elective mutism comprises the other three types espoused by Hayden" (Harris, 1996).

Psychogenic or neurological mutism should not be included in the diagnosis of selective mutism. An example of a psychogenic voice disorder is conversion mutism. Aaronson defined the disorder as "loss of voluntary control over normal striated muscles or over the general or special senses as a consequence of environmental stress or interpersonal conflict" (as cited in Harris, 1996).

Some researchers, such as Atoynatan (1986), proposed that speech development delays that render a child too self-conscious of his or her speech disorder as well as severe shyness, should be excluded from the diagnosis of selective mutism (Atonynatan, 1986).

Family Dynamics

While many authors have attributed a history of family psychopathology as a contributing factor in selective mutism (Cunningham et al., 1984), results regarding the degree of impairment have been contradictory. A study by Kolvin and Fundudis reported that 10% of families who had children with

selective mutism demonstrated a personality disorder (as cited in Cunningham, Catoldo, Mallion, & Keyes, 1984). Twenty family histories reviewed by Krohn et al. (1992) revealed that only one parent (2.5%) had a history of documented mental illness. Five of the parents (12.5%) described themselves as pathologically shy and anxious (Krohn et al., 1992). Similarly, Brown and Lloyd (1975) noted that parents of children with selective mutism were more likely to describe themselves as shy and less likely to visit friends than the control group. A history of social anxiety symptoms or of childhood selective mutism was reported by a few of the parents of children with selective mutism (as cited in Black & Uhde, 1995). Several authors have suggested that children with selective mutism model anxious family members, which may contribute to the high anxiety experienced in speaking situations. In addition, these researchers found an increased incidence of mutism among the siblings of children with selective mutism (Cunningham et al., 1984).

Parent-parent and parent-child interactions have been described by several researchers as conflictual. Harris (1996) and Atoynatan (1986) suggested that parental relationships appear to be of decisive significance for the presence of the symptoms of selective mutism (Atoynatan, 1986). Fathers of children with selective mutism have been characterized as often being ineffectual and distant; it has been further hypothesized that

this is the reason the mother turns to the child (Krohn et al., 1992). Other researchers have implicated a tendency for the child to ally with one parent, typically the mother, in a tight symbiotic relationship (Atoynatan, 1986). Hostility and disappointment often existed between the parents. Anger was often expressed by the refusal of one parent to talk to the other; modeling the behavior, the child also refused to talk. The symptom was often unintentionally encouraged through disturbed family interaction (Lazarus et al., 1983). In contrast, family discord has not been found to be significantly higher in this population as compared to other emotionally disturbed families. However, only two controlled studies have been conducted in this area (Krohn et al., 1992).

Wright et al. (1985) described the relationship between the mother and child as a neurotic one, characterized by dependence and ambivalence coupled with an excessive need to control. In 1979, Meijer provided a psychological profile to describe the personality types displayed by mother of children with selective mutism.

"The mother feels lonely, deprived, neglected, depressed, and resentful toward the father. The mother ties a highly sensitive young child to her, who then feels entangled in a loyalty conflict with regard to the parents and develops a resulting fear of commitment by verbal communication with other adults. The child's fear of arousing the mother's resentment and of separation from her increases with the level of hostile dependency on her. The fear is reduced by the symptom of selective mutism by speaking only to children and some adults, who are felt to be outside the parental

conflict sphere...The depressed child complies with the mother by not speaking to proven or potential objects of her anger and frustration, thus attempting to ensure continuation of protection" (as cited in Atoynatan, 1986, p.17).

Developmental History

Several developmental risk factors are present in children with selective mutism. In Steinhausen and Juzi's 100 case analyses, one third of the total sample were exposed to one risk factor during pregnancy, 43% had complicated deliveries, and 20% had one or more complications during the neonatal period. Delayed motor development was evident in 18%, and delayed toilet training occurred in 24% of subjects (Steinhausen & Juzi, 1996).

A considerable number of children with selective mutism displayed some premorbid speech and language disorders (Steinhausen & Juzi, 1996). Atoynatan also noted that an underlying speech defect existed in approximately 20% of the children with selective mutism whom he studied. (as cited in Harris, 1996).

Characteristics

Throughout the literature, several associated characteristics have been consistently identified. The DSM-IV indicated an impairment in social and academic functioning. Common complications include school failure and teasing by peers (Dummit, Klein, & Tancer, 1996). The features most often identified with selective mutism were as follows: excessive

shyness, social withdrawal or isolation, separation anxiety, clinging behavior, oppositional behavior, obsessive compulsive behavior, negativism, grimacing, facial tics, enuresis and soiling, eating disorders, sleep disorders, depressions, and hyperactivity.

The most common personality feature consistently cited was shyness, which affected 85% of the children (Steinhausen & Juzi, 1996). A variety of studies identified anxiety in the form of shyness, timidity, and social withdrawal (Harris, 1996; Cunningham et al., 1984; & Thompson, 1989).

Clinging behaviors were also commonly seen when the child and parents are in public. Investigators have suggested that the children often attempted to gain control through temper tantrums, clinging, and crying (Thompson, 1988). In contrast, the child's behavior at home was characterized as being oppositional deviant. The parents reported a lack of compliance and disregard of simple rules and requests. Parental descriptions of their children included adjectives such as "difficult, stubborn, demanding, resistive, negative, and persistent" (Thompson, 1988).

Research has indicated that children with selective mutism were resistant to daily routines such as toileting, eating, and sleeping. Studies have cited enuresis as a characteristic of selective mutism, affecting as much as 25% of the sample. Coupled with an 8% of encopretic children, the rate of

elimination problems is remarkably high compared to the normal population (Steinhausen & Juzi, 1996). Parents of children with selective mutism often reported difficulty with toilet training, complaining that "their children either demonstrated no interest in toileting, that they learned the skill and then regressed, or that they are highly erratic in their toileting habits" (Thompson, 1988, p.13-14). In addition, daily routines of sleeping and eating were also resisted by children with selective mutism. They often refused to stay in bed and joined their parents during the night. In one of their samples, Steinhausen and Juzi noted 57.9% occurrence of sleep disorders (Steinhausen & Juzi, 1996). Parents often describe their children with selective mutism as picky eaters. Selectively mute children may insist upon maintaining control over eating habits by refusing to come to the table for meals and preferring to eat "when he or she wants to" (Thompson, 1988).

While hyperactivity was originally believed to be an associated feature of selective mutism, much of the recent literature cited the occurrence of hyperactivity as rather rare (Steinhausen & Juzi, 1996). Steinhausen and Juzi (1996) found that externalizing features, such as aggression or hyperactivity, were much less common than the internal factors of shyness and anxiety.

Steinhausen and Juzi (1996) proposed that no common pattern

of behavioral abnormalities may be expected in children with selective mutism. It should be noted that in some children, these associated features represent premorbid symptoms, while they are comorbid symptoms in others who develop mutism (Steinhausen & Juzi, 1996).

The Selective Mutism Foundation, Inc. of Sunrise, Florida is a group composed primarily of parents and psychologists. They believe selective mutism is a psychiatric disorder often associated with extreme shyness, anxiety disorder and social phobia. In addition, they suspect that some children with selective mutism may have obsessive compulsive disorder (OCD) or Tourette Syndrome symptoms along with a variety of other phobias. The Foundation advocates behavioral management techniques to gradually desensitize the child's fear through use of sequenced short term goals, positive reinforcement and rewards (Selective Mutism Foundation, Inc., 1997).

Psychological Characteristics

Studies have found significantly higher rates of social phobia, avoidant disorder, simple phobia, overanxious disorder, separation anxiety disorder, and obsessive compulsive disorder among children diagnosed with selective mutism (Black & Uhde, 1995). However, a study using different methodology found only social phobia and simple phobia to be elevated in the sample (as cited in Black & Uhde, 1995). Significant correlations were

found between mutism severity ratings of each child and the parents' rating of the anxiety symptoms of their child, suggesting that a child's anxiety level could be an important factor in determining severity of mutism (Black & Uhde, 1995). However, this study suffered from several methodological limitations. For example, all interviews were done by a single clinician, thus, validity and reliability may have been affected by investigator bias (Black & Uhde, 1995).

Associated Speech and Language Disorders

Research has paid little attention to the associated speech and language problems in children with selective mutism (Giddan et al., 1997). Traditionally, diagnosis of selective mutism has focused on psychological aspects, with little emphasis on speech and language problems. However, recent studies at the UCLA Neuropsychiatric Institute revealed a high incidence of psycholinguistic involvement among individuals with selective mutism (Giddan et al., 1997). In a sample of 24 children with selective mutism, 75% had articulation problems; 86% failed auditory processing measures; 68% demonstrated receptive language problems; and 75% showed expressive language deficits (Giddan et al., 1997). Steinhausen and Juzi's study also found a considerable number of children with some premorbid speech and language disorders. They identified articulation disorders and expressive language disorders as the most common. Of their total

sample, 38% demonstrated at least one speech and language disorder (Steinhausen & Juzi, 1996). Other researchers have also reported an incidence of speech difficulties greater than that of the normal population. For example, Wright et al. identified 5 of 24 cases as displaying speech difficulties. Kolvin and Fundudis found the incidence to be much higher, noting 12 of 24 cases (as cited in Cunningham et al., 1984).

Erickson and Mayer (1972) analyzed speech samples of children with selective mutism. The samples were obtained from audio tapes of the children interacting with family members. They found a common characteristic to be limited quantity and quality of verbal behavior. The authors hypothesized that these children had delayed or disordered speech and/or language abilities which made them expect failure in communicative interactions. Thus, the children avoided communicating by speaking in only select situations (Erickson & Mayer, 1972). This research led to the formation of a desensitization therapy program for children with selective mutism.

Despite the above findings, Dummit (1997) described children with selective mutism as having normal language skills, except for a small minority who may have delayed language development and abnormalities of articulation. Atoynatan (1986) believed that children exhibiting a speech disorder should be excluded from the diagnosis of selective mutism, even though he found an

underlying articulation disorder in approximately 20% of his cases.

Assessment

Any child who is believed to have selective mutism should receive a comprehensive evaluation to rule out other disabilities and assess comorbid factors. An individual treatment plan can then be developed (Dow et al., 1995). A comprehensive evaluation includes assessment of hearing and auditory behavior; communication, including expressive and receptive language, nonverbal language, and alternate communication behavior; intelligence; physical integrity; motor behavior; play skills; and social behavior (Thompson, 1988). In addition, Harris stated that assessment should include organicity and psychosocial factors involving the family (Harris, 1996). A professional team including a pediatrician, a psychologist or a psychiatrist, a speech-language pathologist, and an audiologist should cooperate together to determine an accurate diagnosis (Harris, 1996).

Dow et al., (1995) divided assessment into seven areas including symptoms, social interaction, psychiatric, medical, audiological, academic and cognitive, and speech and language. Information from each of the seven areas should be obtained through a parental interview, as well as clinical observation of the child (Dow et al., 1995).

Valid and objective test data and scores for children with

selective mutism are often difficult to secure due to their resistant personalities. These children may sit passively and ignore the evaluator, cooperate for short periods and then refuse to continue, exhibit purposeful errors, or blatantly resist the situation (Thompson, 1988). Thompson (1988) warns that attempts to bribe or coax the child are often met with further resistance. Assessment typically involves more than one diagnostic session; conclusions regarding the child's abilities should be based on extended observations (Thompson, 1988).

Treatment

The history of treatment for selective mutism covers a broad spectrum that ranges from the psychoanalytic schools of Europe to more contemporary therapy (Giddan et al., 1997). Despite the fact that multiple forms of treatment have been suggested in the literature, very few have been used with more than one client. The various treatments can be divided into six broad categories: behavioral modification, psychodynamic (intrapsychic) therapy, family intervention, pharmacotherapy (drug therapy), speech therapy, and a combination of approaches.

Behavior Modification.

Behavioral interventions, based on the suggestion that mutism could be a learned behavior, have been reported as the most frequently utilized treatment methodologies for selective mutism (Dow et al., 1995). The treatment procedures involved in

behavior therapy typically included reinforcement, stimulus fading; escape/avoidance, time-out response cost, and overcorrection (Cunningham et al., 1984). These approaches attempted to reduce anxiety about talking and/or reinforce the child for speaking. Labbe and Williamson (1984) concluded that researchers who used a behavioral approach generally achieved better results than those using a more family oriented intervention (as cited in Harris, 1995).

Cunningham noted the use of reinforcement and shaping procedures to gradually increase the response required for a specific reinforcer (Cunningham et al., 1984). Furst (1989) reported successful remediation using reinforcement/shaping coupled with punishment techniques (as cited in Harris, 1995). Reinforcement was seldom used by itself to initiate verbalization.

In stimulus fading, the child and people with whom the child consistently interacts are gradually moved into settings in which the child does not speak. Once speech has been established in the new environment, different individuals are introduced (Cunningham et al., 1984). A successful stimulus fading procedure was developed by Kupietz and Schwartz (1982). Their program was divided into four distinct phases. During Phase I, the parent was brought into the school to converse with the child in that setting. Phase II involved the teacher observing the

interactions while gradually moving closer to the child. The teacher began asking the child questions through the parent during Phase III. In Phase IV, speech was carried over into the classroom by having the child speak to the teacher in the presence of one or two children. The rest of the class was slowly integrated into these interactions (as cited in Harris, 1996). Harris (1996) suggested that this method could be adapted for use by a speech-language pathologist.

The timeout method used by Wulbert, Nyman, Snow, and Owen (1973) contributed to progress in stimulus fading plus reinforcement procedures. In their research, children received a one minute timeout, in which they were sent to their room, for refusing to speak (as cited in Cunningham et al., 1984).

During escape/avoidance procedures, children were isolated from classroom activities, allowed to "escape" from after school detention, or allowed to avoid an adverse consequence by speaking (Cunningham et al., 1984). While escape/avoidance procedures have been reported as successful in a few cases, most authors concluded that threats and avoidance procedures proved ineffective (Cunningham et al., 1984). This procedure was shown to increase disruptive behavior at home and failed to establish speech (Cunningham et al., 1984).

Response cost involved tokens or coins being earned and/or subtracted to reinforce speaking and "punish" the mutism. This

method was typically used in conjunction with an overcorrection treatment. The overcorrection procedure incorporated by Matson (1979) required the child to repeatedly write words he refused to speak (as cited in Cunningham et al., 1984).

A new type of behavior therapy, known as response initiation, was developed and refined at the Hawthorn Center (Krohn et al., 1992). This intervention incorporated empathetic dynamic interventions, firm behavioral expectations, family involvement and communication with the school (Krohn et al., 1992). Information was presented to the parents explaining the harsh nature of the treatment. The child was then informed of the expectation for verbalization of at least one word before being allowed to leave the therapist's office. Giddan et al. (1997) reported most children spoke within 1-2 hours and rarely more than 4 hours was necessary. Parents were asked to establish similar requirements for the child at home and in public. Within one month of the initial visit, steps were taken to target verbal behaviors at school. Krohn et al. (1992) reported that the 20 children treated with this approach all had fair to excellent outcomes.

Psychodynamic.

Advocates of the psychodynamic approach discouraged the use of behavior modification techniques, stating that "they leave the emotional conflict unchanged and do not contribute to ego

development" (Atoynatan, 1986). This treatment process viewed the mute behavior as a dysfunction in personality or the development of maladaptive traits. Therapy most often occurred in a one-on-one counseling session, emphasizing the association between the mutism and family interaction (Harris, 1996). Some authors suggested the mother should be involved in the treatment process, but few studies have utilized this recommendation. Atoynatan, Hesselman, Krolan, and Shreeve (1986) reported successful treatment of selective mutism with the psychodynamic approach. In contrast, Brown, reporting on 10 cases, and Wergeland reporting on 11 cases, described the psychodynamic treatment as long and difficult with a generally poor outcome (as cited in Krohn et al., 1992).

Family Intervention.

Harris (1996) recommended that the family be active in any treatment process, especially if the learned behaviors are to carryover into everyday use. Meyers advocated a family therapy because he viewed selective mutism as a symptom of problematic family dynamics (as cited in Harris, 1996). The therapist must work through the family's distrust of the outside world. This was a formidable task considering the therapist was viewed as a member of that society (Harris, 1996). Parker (1960), using a family oriented treatment approach, indicated that all 27 of the children with selective mutism in his sample spoke within 2 years

of beginning treatment. However, his admission criteria did not control for length of mutism and success was defined as "some use of speech" in the classroom (as cited in Krohn et al., 1992).

Several researchers, including Rosenberg and Lindblad (1978), stated that family therapy was more beneficial than individual therapy. They further advocated a combination of family and behavior therapy to eliminate the mutism, as well as change the dynamics which allowed the mutism to develop (as cited in Harris, 1996).

Pharmacotherapy.

Pharmacotherapy treatment for selective mutism has recently been reported in the literature. The drugs used were medications which have been documented as helpful in the treatment of social phobias. Golwyn and Weinstock (1990) reported successful treatment of selective mutism with phenelzine. Children taking phenelzine reportedly became quite talkative, but experienced side effects, such as rapid weight gain and mild constipation (as cited in Cline, 1994).

Based on the belief that selective mutism may be a symptom of social phobia, Black and Uhde (1992) proposed the use of fluoxetine. Several children in Black's study showed significant improvement on some mutism ratings, but not on others. Many subjects were still symptomatic at the end of the study (Dow et al., 1995).

Dummit et al. (1996) reported that studies on drug treatment had too few subjects to detect treatment group differences, however, the studies provided preliminary evidence in support of further research into the effectiveness of drugs like fluoxetine (Dummit et al., 1996). According to Dow et al. (1995), a medication trial should only be considered if anxiety is a prominent factor or if the patient has not responded to other forms of treatment.

Speech Therapy.

Smayling (1959) was the first to use speech therapy as a primary intervention for selective mutism. He theorized that, while not demonstrably the sole etiological factor, speech difficulties were causally related to mutism (as cited in Dow et al., 1995). In Smayling's report, five of the six treated children began to speak in school once their speech problems had been corrected. Clinicians purposely avoided mentioning the mutism or discussing the child's feelings; rather they focused on articulation and language training (Dow et al., 1995).

Strait (1958) advocated the use of speech therapy in conjunction with behavioral modification techniques, such as reinforcement (as cited in Dow et al., 1995). While most studies of speech therapy as a treatment for selective mutism have been conducted with children identified as having speech and language problems, Dow et al. (1995) hypothesized that any child with

selective mutism could profit from structured language practice.

Dow et al. (1995) stressed the contribution a speech-language pathologist could make in developing a behavioral program to treat selective mutism. She and her colleagues felt children with or without underlying speech disorders could gain confidence in their linguistic ability through work on pronunciation, increasing comprehension, pragmatic skills, and role play of real-life interactions (Dow et al., 1995).

Erickson and Mayer (1972) developed a therapy program for children with selective mutism to be used by speech-language pathologists. The program began with a nonverbal commitment and proceeded in small steps to a verbal commitment characterized by expansion and response to initiated verbal interactions. The authors stressed the importance of careful observation of the child's behavior in order to ensure the program progressed at an appropriate rate (Erickson & Mayer, 1972). Richard (1983) developed a similar program which identified two main goals: 1) desensitization to communicative pressure, and 2) transference of communicative responsibility.

Combination Approach.

Despite the multiple treatment techniques discussed, few, if any, were used in isolation. Many of the most successful professionals in the treatment of children with selective mutism stressed the importance of a combination approach (Harris, 1996).

Giddan et al. (1997) advocated a multidisciplinary team approach which combined several of the aforementioned therapies. Speech-language pathologists, special education teachers, psychiatrist/psychologists, and trainees from various professional fields should work together to develop an individualized service plan for each child. Giddan et al. (1997) suggested that children should participate in individual therapy, but all children should also attend group therapy. Occupational and speech-language therapy are implemented as needed.

Selective mutism has long been associated with the psychological community, however, recent literature highlights the contributions a speech-language pathologist can provide in assessment and treatment. Speech language pathologists are often among the first professionals to come in contact with children with selective mutism (Harris, 1996), and yet, the literature regarding the disorder within the field is sparse at best. The majority of research in the area of selective mutism appears in the literature of the psychological community; however, due to the communicative components of the disorder, speech-language pathologists are often the first professionals that parents contact for intervention. The literature regarding selective mutism offers a variety of treatment approaches, but does not indicate the professionals responsible for implementing them. While research conducted in the area of

selective mutism has resulted in a great deal of theoretical information, clear delineation of responsible assessment and treatment options is lacking.

A similar problem existed regarding knowledge, diagnosis, and treatment in the area of autism. A survey study was conducted by Bour (1996) on the knowledge of Illinois speech-language pathologists and school psychologists regarding autism. Bour's study indicated that both groups harbored misconceptions regarding autism and experienced difficulty making a differential diagnosis. A high percentage of both speech-language pathologists and school psychologists expressed a desire for further education in the area of autism (Bour, 1996).

Speech-language pathologists continue to come in contact with selective mutism; therefore, more research is needed from a speech pathology perspective. The purpose of this study was to evaluate the degree to which the disorder is being seen by speech-language pathologists, their knowledge of the disorder, and their level of comfort in treating and diagnosing children with selective mutism. Furthermore, the study attempted to determine if a significant difference existed between Illinois speech-language pathologists and school psychologists in regard to selective mutism in the above listed areas.

A pilot study was conducted to evaluate the effectiveness of a questionnaire designed to survey knowledge in the area of

selective mutism (Appendix A). Twenty-two of sixty surveys distributed to speech-language pathologists were returned, as well as three of fifteen from school psychologists. The respondents indicated that speech-language pathologists were seeing and treating this disorder in their professional practices. Data obtained from the pilot study were not compared between speech-language pathologists and psychologists, due to the small number of respondents.

Data obtained from the speech-language pathologists surveyed were analyzed using Pearson correlations to determine the relationship between the following: (1) years of experience and level of comfort treating and making a differential diagnosis, (2) number of clients with selective mutism and level of comfort treating and making a differential diagnosis, (3) formal training in the area of selective mutism and level of comfort treating and making a differential diagnosis. Results indicated a weak negative relationship between the number of clients seen and comfort making a differential diagnosis. As the number of clients increased, the level of difficulty making a differential diagnosis decreased. A weak positive correlation was present between formal training and level of comfort with differential diagnosis. This relationship indicated that receiving some type of formal training made differential diagnosis less difficult. While the other data did not show significant relationships, all

but one correlation indicated a trend in the predicted direction of a correlation. These results suggested the need for further study. It was hypothesized that a larger sample would reveal significant correlations.

Research on the disorder of selective mutism in speech-language pathology is relatively scarce compared to that of psychologists. For this study, Illinois school psychologists were used as a comparison group to contrast their responses to the questionnaire with those of Illinois speech-language pathologists working in the public schools.

Research Questions

The following research questions were posed:

(1) Do relationships exist between variables such as training, years of experience, number of clients and level of comfort with treatment and diagnosis, in regard to selective mutism?

a) Is there a relationship between formal training in selective mutism and the level of comfort treating and making a differential diagnosis of selective mutism?

b) Is there a relationship between years of experience in the profession and the level of comfort treating and making a differential diagnosis of selective mutism?

c) Is there a relationship between the number of clients treated with selective mutism and level of comfort in making a differential diagnosis of selective mutism?

(2) Is there a significant difference between Illinois speech-language pathologists working in the public schools and school psychologists' views regarding the professionals responsible for diagnosis, the professionals primarily responsible for treatment, the best treatment option for selective mutism, and disorders difficult to differentiate from selective mutism?

(3) In relation to the characteristics checklist:

(a) Is there a difference between the characteristics checked as associated with selective mutism by speech-language pathologists versus psychologists?

(b) Is there a difference between the characteristics checked as observed in selective mutism by speech-language pathologists versus psychologists?

Chapter 2

MethodInstrument

A 13-item questionnaire was designed and refined through a pilot study and included multiple choice questions, Likert-type rating scales, and a characteristics checklist. A copy of the survey is attached (Appendix A).

The questionnaire form included spaces to mark the respondent's current position, years of experience, educational degree, and whether or not formal training in the area of selective mutism had been received. The form also included space for the respondent to indicate the approximate number of children with selective mutism which they had served in a professional capacity, and whether or not they would like opportunities to learn more about this disorder.

In addition to these questions, a Likert-type rating scale was used to measure the respondent's comfort level in treating children with selective mutism, as well as differentially diagnosing selective mutism. The Likert-type rating scale contained ratings from 1-8 with an even number of choices to avoid a midpoint selection. Questions were designed to assess the group or groups of professionals that the respondents felt should be involved in diagnosis and treatment of selective mutism. The respondents were also asked to indicate the type of

treatment they believed to be most effective for treatment of the disorder. An additional multiple choice question determined the specific disorders that are difficult to differentiate from selective mutism.

A characteristics checklist was used to determine the characteristics which respondents viewed as associated with selective mutism. Respondents were asked to indicate which of the characteristics they observed in their clients with selective mutism.

Procedures

The examiner mailed 250 questionnaires to randomly selected Illinois Speech-Language-Hearing Association (ISHA) members and 250 randomly selected Illinois School Psychologist Association (ISPA) members. The names and addresses used for mailing were obtained from the above mentioned organizations. A complete membership listing was ordered from the Illinois School Psychologist Association. A mailing list of speech-language pathologists working in public school settings was requested from the Illinois Speech-Language-Hearing Association. The organization compiled this list with speech-language pathologists holding a Type 10 certificate. A systematic sampling method was used to obtain a random sample. Every third name was taken from the ISPA directory, and every third person was selected from the ISHA directory to participate in the study. This procedure was

modified if the third name had an out of state address. In these cases, the next name was chosen and the random sampling continued thereafter.

Questionnaires were sent with a cover letter (Appendix B) explaining the purpose of the survey (Appendix A) and a postage-paid return envelope. Due to difficulties with the weight of the survey, 30 surveys were returned "additional postage due". These were immediately remailed. In addition, 2 surveys were returned "address unknown".

Respondents were given four weeks from the day questionnaires were sent to return the surveys. Zip codes were placed on return envelopes to track the location of questionnaires returned.

Subjects

Of the 500 surveys mailed, 246 were returned for an overall response rate of 49%. Nineteen surveys were unusable due to missing or incomplete information. One hundred and twenty-one of the psychologists' surveys were analyzed for a response rate of 48%. Speech-language pathologists returned 106 complete surveys for a response rate of 42%.

Respondents were asked to state their years of experience in the field, the approximate number of children with selective mutism they have treated in a professional capacity, and whether or not they had received formal training regarding selective

mutism. Table 1 summarizes the respondents' demographic characteristics as indicated on returned questionnaires. Appendices C and D summarize the respondents' identifying information as well as geographic location.

Table 1

Demographic Characteristics of School Psychologists & Speech-Language Pathologists

	<u>Sch. Psy</u>	<u>SLP</u>
	n= 119	n= 106
Years of experience		
Mean	13	17
SD	9.7	9.3
Number of clients with selective mutism		
Mean	1.7	2.3
SD	1.7	3.1
Formal training in selective mutism?		
Yes	6	12
No	113	94

The school psychologists' experience in their field ranged from .5 years to 50 years, with the average years of experience being 13. The speech-language pathologists' experience ranged from 1 year to 43 years, with the average years of experience being 17. The number of clients with selective mutism seen by school psychologists ranged from 0 to 10 with a mean of 1.7 clients. Seventy-eight percent of the school psychologists sampled had seen at least one client. The number of clients with selective mutism seen by speech-language pathologists ranged from 0 to 25 with a mean of 2.3 clients. Seventy-five percent of the

speech-language pathologists had seen one or more clients with selective mutism. Five percent of school psychologists and 11% of speech-language pathologists indicated that they had received some type of formal training in the area of selective mutism. A majority of the sample indicated a desire to learn more about the disorder.

Chapter 3

Results

Analysis of the data was completed using the Number Cruncher Statistical program. The first research question was assessed by calculating Pearson correlations to determine if a relationship existed between the variables of 1)years of experience, 2)formal training, and 3) number of clients seen with selective mutism and the level of comfort treating and making a differential diagnosis of selective mutism. Means and standard deviations of the above variables are presented in Table 2. Results of the Pearson correlations are summarized in Tables 3 and 4.

Table 2 Mean demographic information and mean comfort levels

	Years of exp.	Formal training	# of clients	Comfort treating	Comfort diagnosing
Sch. Psy. n= 119	Mean= 13 SD= 9.7	Yes= 6 (5%) No= 113 (95%)	Mean= 1.7 SD= 1.7	Mean= 3.0 SD= 1.4	Mean= 3.7 SD= 1.7
SLP's n=106	Mean= 17 SD= 9.3	Yes= 12 (11%) No= 94 (89%)	Mean= 2.3 SD= 3.1	Mean= 3.3 SD= 1.8	Mean= 3.5 SD= 1.8

The mean level of comfort treating selective mutism for school psychologists was 3.0 with a range of 1-6. The mean level

of comfort making a differential diagnosis was only slightly higher at 3.7 with a range of 1-7. These numbers fell at the "slight comfort" level on the Likert scale. The speech-language pathologists' mean level of comfort treating selective mutism was 3.3 with a range of 1-8. The mean level of comfort making a differential diagnosis as 3.5 with a range of 1-8. Again, this indicated "slight comfort" on the Likert scale.

Table 3

Pearson correlations for school psychologists

n=119	Years of experience	Formal training	Number of clients with SM
Comfort Treating	.32*	-.08	.34*
Comfort Making a Differential Dx	.31*	-.07	.39*

Table 4

Pearson correlations for speech-language pathologists

n=106	Years of Experience	Formal Training	Number of Clients with SM
Comfort Treating	.17	-.20	.43*
Comfort Making a Differential Dx	.11	-.05	.46*

Note. * = significant correlation. Level of significance >.30.

A moderate correlation was found between the number of clients seen and the level of comfort treating (Psy $r=.34$ & SLP $r=.43$) as well as making a differential diagnosis ($r=.39$ & $r=.46$) of selective mutism. As the number of clients increased, the level of comfort diagnosing and treating increased. This was

true for both groups of professionals.

A weak correlation was found between years of experience and comfort treating ($r=.32$) and making a differential diagnosis ($r=.31$) of selective mutism within the school psychologists. The more years of experience a respondent had, the higher their level of comfort treating and diagnosing selective mutism.

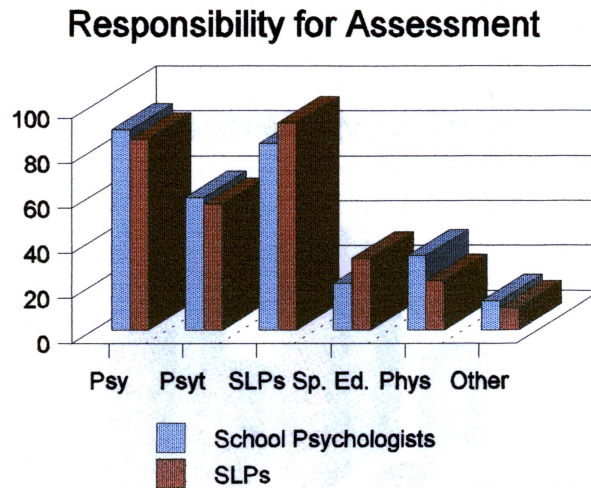
The variable years of experience did not yield a significant correlation for speech-language pathologists. In addition, the variable of formal training did not yield significant correlations for either group.

The second research question was designed to determine if a significant difference exists between the two groups in opinions regarding professional responsibility, treatment options, and differential diagnosis. The question was assessed by multiple choice survey questions 7,8,10, and 12. The data from these questions were analyzed to determine the frequency with which each choice was marked. For each question, a Chi Square Test for Independent Samples was conducted on the responses with the greatest discrepancy between the two groups of subjects. If no significant difference was found ($p>.05$), there were no significant differences in regards to the specific question.

Questionnaire item number 7 was designed to determine the groups of professionals that subjects viewed as responsible for diagnosis. Respondents were asked to circle all groups they

believed should be involved in assessment. The following chart illustrates the distribution of professionals selected by the two groups as being responsible for diagnosis.

Figure 1 Responsibility for Assessment



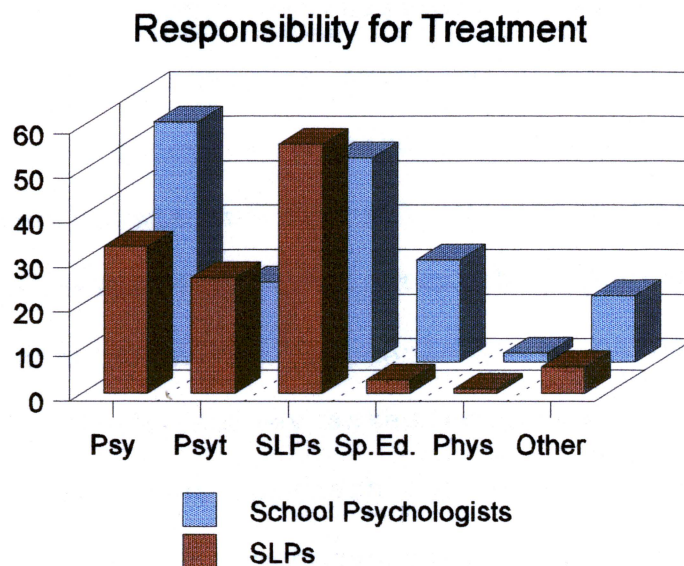
Note. Pys=Psychologists, Psyt=Psychiatrists, SLPs=Speech-language pathologists, Sp.Ed.=Special Education teachers, and Phys=Physicians

The school psychologists most often indicated themselves as responsible (89%) followed by speech-language pathologists (83%) and psychiatrists (59%). Similarly, speech-language pathologists indicated themselves most often (92%), followed by psychologists (85%) and psychiatrists (56%). Chi Square statistical analysis revealed no significant differences between the two groups. Therefore, the respondents' views on the professionals responsible for diagnosis of selective mutism were not significantly different.

Respondents were then asked to indicate the group of

professionals they believed to be primarily responsible for treatment. Figure 2 summarizes the responses of the two groups in regards to professional responsibility for treatment of selective mutism.

Figure 2 Responsibility for Treatment

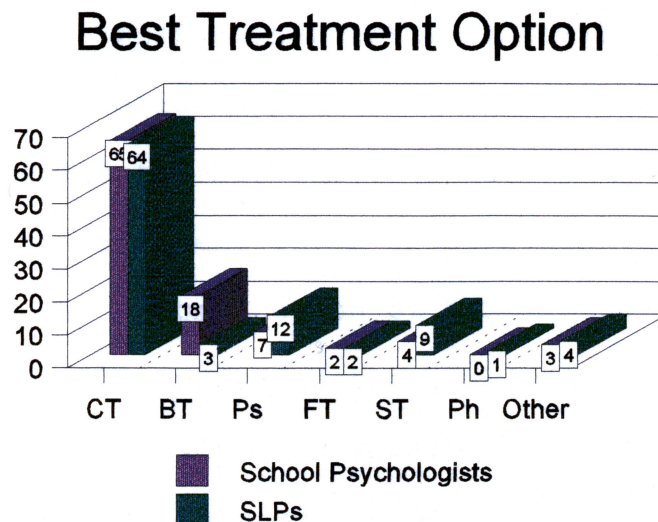


A majority of the respondents circled more than one group, therefore, the results were analyzed in the same manner as question 7. Of the 119 surveys analyzed from school psychologists, 54% viewed themselves as responsible for the treatment of selective mutism. 46% of the psychologists indicated that speech-language pathologists are also responsible for treatment. Other groups indicated were as follows: psychiatrists (18%), special education teachers (23%), physicians (2%) and other professionals (15%).

Among the 106 completed surveys returned by speech-language pathologists, 56% viewed themselves as responsible for treatment of selective mutism. Other professionals indicated were as follows: psychologists (33%), psychiatrists (26%), special education teachers (3%), physicians (1%) and others (6%). Responses of "other" included professionals such as social workers, nursing staff, and regular education teachers. Chi Square Statistical analysis revealed a significant difference between the two groups in regards to treatment responsibility of school psychologists and special education teachers. The school psychologist respondents indicated these two groups significantly more frequently than the speech-language pathologists ($p=.05$).

Item 10 of the survey asked respondents to circle the most appropriate treatment approach for selective mutism. Options included behavioral, psychodynamic, family therapy, speech-language therapy, pharmacotherapy, combination therapy, or other. Figure 3 represents the respondent's choices to the best treatment option.

One percent of the school psychologists did not answer this item. Of the 99% who responded, 65% choose a combination approach, 18% choose a behavioral approach, and 7% choose psychodynamic intervention. Other therapies indicated were speech-language therapy (4%), other (3), and family therapy (2%).

Figure 3 Best Treatment Option for Selective Mutism

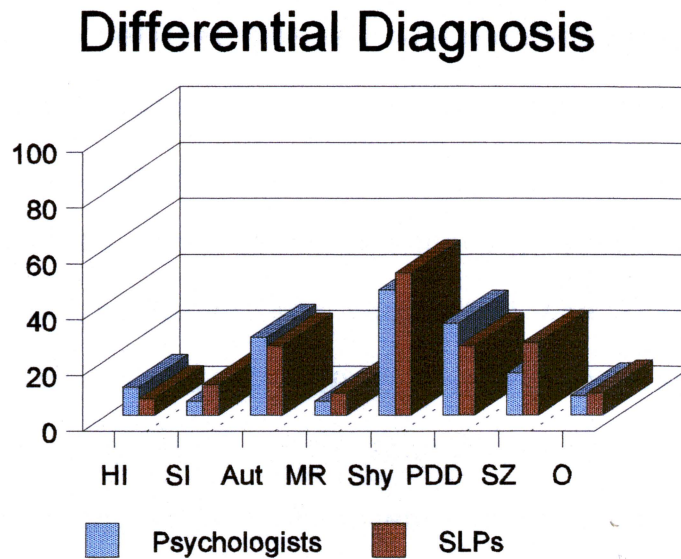
Note. CT= Combination Therapy, BT= Behavioral Therapy, Ps= Psychodynamic Therapy, FT= Family Therapy, ST= Speech-language Therapy, and Ph= Pharmacotherapy.

Five percent of the speech-language pathologists sampled did not respond to this question. Of the remaining 95%, 64% choose a combination approach to treatment of selective mutism. Other treatment options selected were psychodynamic (12%) and speech-language therapy (9%), other (4%), behavioral (3%), family therapy (2%), and pharmacotherapy (1%). Chi Square statistical analysis revealed no significant differences between school psychologists and speech-language pathologists in regards to the best option for treatment of selective mutism.

The respondents who indicated combination therapy as the best treatment for selective mutism were asked to specify which combination they favored. School psychologists indicated 15 different forms of combination therapy, ranging from a

combination of 2 to 5 different approaches. Seven of the 15 therapies included behavioral and speech-language therapy in the combination. Thirty-six percent of the school psychologists felt that the combination approach should consist of behavioral and speech-language therapy only. Speech-language pathologists also indicated 15 different forms of combination therapy. Eighteen percent choose a combination of behavioral and speech-therapy. In addition, 17% indicated the combination of behavior, psychodynamic, family, and speech-language therapy.

The last multiple choice question asked respondents to check all of the disorders which were difficult to differentiate from selective mutism. The choices were hearing impairment, serious emotional impairment, autism, mental retardation, shyness, pervasive developmental disorder, schizophrenia, or other. Respondents were allowed to check all that applied. Figure 4 illustrates the percentage of each disorder chosen by the two groups.

Figure 4 Differential diagnosis

Note. HI= hearing impairment, SI= serious emotional impairment, Aut= autism, MR= mental retardation, Shy= shyness, PDD= pervasive developmental disorder, SZ= schizophrenia, and O= other)

The school psychologists indicated shyness (45%) to be the characteristic most difficult to differentiate from selective mutism, followed by pervasive developmental disorder (33%) and autism (28%). Speech-language pathologists also identified shyness (51%) as the most difficult disorder to differentiate from selective mutism. The other disorders chosen with high frequency were schizophrenia (26%), pervasive developmental disorder (25%), and autism (25%). Chi Square statistical analysis did not reveal significant differences between the two groups in regards to disorders difficult to differentiate from selective mutism.

The third research question was designed to determine if significant differences existed in the associated or observed characteristics between the school psychologists and speech-language pathologists. Table 5 summarizes data obtained from the characteristics checklist.

One hundred and fourteen school psychologists and 98 speech-language pathologists completed the associated characteristics checklist. The observed characteristics checklist was completed by 82 school psychologists and 78 speech-language pathologists. A frequency distribution analysis was conducted on the responses to the characteristics checklist. Twenty-four characteristics were listed on the checklist. Respondents were requested to indicate the characteristics believed to be associated with selective mutism as well as characteristics actually observed in their clients with selective mutism.

Chi Square statistical analysis revealed no significant differences between the two groups in regards to associated or observed characteristics. The two groups were typically within 5-10 percentage points of agreement.

Table 5

Associated Characteristics	Observed			
	Characteristics			
	Psych. (n=114)	SLP (n=98)	Psych. (n=82)	SLP (n=78)
Excessive Shyness	61%	72%	61%	72%
Social Withdraw/Isolation	77%	82%	71%	73%
Separation Anxiety	57%	47%	32%	28%
Clinging Behaviors	40%	32%	21%	17%
Oppositional Deviant Behavior	36%	38%	23%	24%
Obsessive Compulsive Behavior	15%	16%	5%	14%
Negativism	27%	19%	17%	15%
Grimacing	11%	8%	9%	11%
Facial Tics	7%	3%	2%	6%
Enuresis/Soiling	14%	9%	13%	9%
Eating Disorders	10%	15%	2%	5%
Sleeping Disorders	7%	16%	4%	5%
Depression	42%	50%	26%	19%
Hyperactivity	4%	3%	2%	1%
Passive/Aggressive Behavior	53%	55%	49%	49%
Mental Retardation	10%	4%	6%	3%
Hospitalization/Trauma before 3	25%	26%	13%	12%
Parental Conflict	45%	47%	32%	34%
Maternal Overprotection	30%	34%	27%	24%
Family Immigration	17%	16%	6%	12%
Speech Disorders	33%	46%	16%	32%
Language Disorders	47%	51%	34%	45%
Avoidant Disorder	57%	46%	27%	32%
Social Phobia	53%	55%	29%	24%

The frequency percentages for each characteristic were used to rank order the characteristics in order from most often selected to least often selected. Statistical analysis of the rank ordering was not possible because the respondents were not asked to rank order the characteristics. School psychologists indicated social withdrawal, excessive shyness, separation anxiety, and avoidant disorder as the four most often selected associated characteristics of selective mutism. The characteristics of social withdrawal, excessive shyness, passive/aggressive behavior, and social phobia were most often selected as associated with selective mutism by the speech-language pathologists. Both groups indicated the four most often observed characteristics to be social withdrawal, excessive shyness, passive/aggressive behavior, and language disorders.

Chapter 4

Discussion

The disorder of selective mutism has long been associated with the psychological community, however, recent literature highlights the contributions speech-language pathology can provide in assessment and remediation of the disorder (Dow et al., 1995). The present study was designed to assess the views and knowledge of Illinois school psychologists and Illinois speech-language pathologists working in the public schools in regards to selective mutism.

Results indicated that speech-language pathologists and school psychologists in Illinois are encountering children with selective mutism in their professional practice. As would be expected, the number of clients seen with selective mutism had an effect on the level of comfort the professionals experienced with diagnosis and treatment. School psychologists reported increased levels of comfort with treatment and diagnosis as their years of experience increased. No correlation was found between the variable of receiving formal training and the level of comfort treating and making a differential diagnosis of selective mutism for either group, however, less than 10% of the total respondents had ever received any kind of formal training in the area of selective mutism. An increase in the number of professionals receiving formal training may have an effect on levels of comfort

in treating and diagnosing selective mutism.

The respondents indicated professional contact with children exhibiting selective mutism, however, both groups reported low levels of comfort for making differential diagnosis and determining treatment techniques. School psychologists and speech-language pathologists indicated only "slight comfort" with making a diagnosis of the disorder. This rating was relatively low on the Likert scale, yet 92% of speech-language pathologists and 89% of school psychologists viewed themselves as responsible for diagnosis of selective mutism. While over half of the speech-language pathologists and school psychologists viewed themselves as responsible for treatment of selective mutism, both groups of respondents indicated a low level of comfort with treatment of the disorder. The low level of comfort with assessment and remediation of selective mutism may be attributable to the low incidence of formal training with the disorder.

The psychological community is responsible for the majority of the literature regarding selective mutism, however, 83% of school psychologists indicated that speech-language pathologists should be involved in assessment of children with selective mutism. Furthermore, 46% of the school psychologists surveyed indicated that speech-language pathologists should be involved in remediation of selective mutism. Similarly, the sample of speech-

language pathologists indicated that school psychologists should be involved with diagnosis and treatment. Eighty-five percent of speech-language pathologists viewed school psychologists as at least partially responsible for assessment and 33% indicated that psychologists should be involved with treatment. Both samples of professionals indicated each other as at least partially responsible for providing services for selective mutism, therefore, these results may suggest that school psychologists and speech-language pathologists are acknowledging the supposed relationship between communication disorders and psychological problems.

The literature regarding selective mutism suggests a discrepancy between age of onset and age of referral (Richard, 1983 & Krohn et al., 1992). The results of this study suggest that the discrepancy may be attributable to the lack of comfort professionals experience in diagnosing selective mutism. An increase in formal training may aid in professional confidence and, therefore, increase early identification of children with selective mutism.

Giddan et al. (1997) advocated multidisciplinary assessment and treatment of selective mutism. Results from the present study suggest that the school psychologists and speech-language pathologists surveyed concur. Both groups frequently indicated two or more groups of professionals as responsible for assessment

and treatment of selective mutism.

The majority of respondents in both groups indicated a combination therapy approach to be the best option for treatment of selective mutism. This finding is consistent with the literature which cites combination approaches as the most successful therapy for selective mutism (Harris, 1996 , Giddan et al., 1997). A combination of behavioral therapy and speech-language therapy was the option most often indicated by the respondents. Speech-language pathologists reported practicing both of these interventions, which further supports the need for their involvement with children who have selective mutism.

No significant differences were found between school psychologists and speech-language pathologists in regard to disorders difficult to differentiate from selective mutism. Both groups of professionals indicated shyness as a complicating factor to differential diagnosis. This finding supports the need for both groups of professionals to receive training to aid with differential diagnosis of the disorder.

The associated and observed characteristics checked by school psychologists were not significantly different from those of speech-language pathologists. The two groups of professionals agreed that social withdrawal/isolation and excessive shyness were the most common characteristics of selective mutism. Research conducted in the area of selective mutism has yielded

similar findings in regard to these characteristics (Steinhausen & Juzi, 1995 & Black & Uhde, 1992).

The associated and observed characteristics were rank ordered for each of the two groups by frequency. Results suggested that school psychologists and speech-language pathologists were in agreement as to the behavioral profiles of children with selective mutism.

Speech disorders were ranked as the 14th most frequently selected behavior of the observed characteristics by school psychologists and the 6th most frequently selected observed characteristic by the speech-language pathologists. This characteristic produced the greatest discrepancy between the groups. The difference may be attributable to the fact that children with selective mutism who demonstrated a speech disorder would be referred to a speech-language pathologist rather than a school psychologist.

The overall results of the survey indicated that both Illinois school psychologists and speech-language pathologists viewed themselves and each other as mutually responsible for the diagnosis and treatment of selective mutism. Despite this fact, very few of the respondents in either group had received any formal training on how to successfully diagnose and treat the disorder. While the two groups of professionals viewed themselves as responsible for assessment and remediation of

selective mutism, both groups indicated low levels of comfort in their ability to successfully provide those services. A majority of the respondents did indicate a desire to learn more about the disorder. A desire to learn more about selective mutism may indicate that the respondents are encountering selective mutism more often in their professional practice or that they feel uncomfortable with the disorder.

Results of the present study suggest a need for clinical research on selective mutism within the field of speech-language pathology. Seventy-five percent of the speech-language pathologists sampled had treated selective mutism, yet very little research has been conducted in the field. Opportunities for formal training are necessary for the members of both professional groups to increase understanding of and confidence in working with children with selective mutism.

Limitations of the Study

Within the study, there were limitations that may have affected the results. The subjects from the study represented only the views and knowledge of a sample of Illinois school psychologists and speech-language pathologists. Secondly, not all of the speech-language pathologists worked within the public schools. The addresses for the speech-language pathologists were obtained from the Illinois Speech-Language-Hearing Associations' list of professionals with a Type 10 certificate. While this was

assumed to be the best list for obtaining names of speech-language pathologists working in the public schools, a Type 10 certificate does not guarantee employment in a public school setting. In addition, the results of this study do not represent psychologists and speech-language pathologists employed in a medical setting. School psychologists do not always carry a caseload, therefore, the views of clinical psychologists might alter the results. Finally, it would have been helpful if the respondents had been asked to rank order the associated and observed characteristics rather than simply those that applied. If this had been done, formal correlation statistics could have been performed with the data.

Implications for Future Research

Based on the data obtained and conclusions drawn, several implications for future research have been formulated.

1. The design of the present study appears to be appropriate for replication with a larger and more diverse geographic sample.
2. A similarly designed study using medical based psychologists and speech-language pathologists should be conducted to determine differences between school based psychologists and speech-language pathologists versus those working in a clinical setting.
3. Subsequent research should expand information on the

combination approach to treating selective mutism.

This approach to treatment was advocated by the majority of the sample. Future research into the efficacy of various combinations would be valuable to those professionals currently providing treatment.

4. Respondents indicated combinations of behavioral and speech-language therapy as the best treatment options for selective mutism. Research into the specific procedures used within the two interventions would be beneficial.
5. Replication of the study using a rank order question for the associated and observed characteristics should be conducted to formally assess relationships between and within the two groups of professionals.
6. A survey should be conducted to determine how professionals prepare for a client with selective mutism without receiving formal training. A majority of the respondents had never received formal training and yet many had treated clients with selective mutism. Studies concerning the ethical implications of treatment are critical.

This study demonstrated that while selective mutism has long been associated with the psychological community, speech-language pathologists are providing assessment and treatment of

the disorder. In addition, speech-language pathologists view themselves as at least partially responsible for the diagnosis and treatment of the disorder. School psychologists and speech-language pathologists have similar views on professional responsibility, treatment options, and characteristics regarding selective mutism. These two groups of professionals should adopt a goal of communication and collaboration to provide the most appropriate services to children with selective mutism.

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Appendix A

7. Circle current position: Speech Pathologist Psychologist
Years experience: _____
8. Highest degree held:
A) B.A. or B.S.
B) M.A. or M.S.
C) Specialist
D) Working on Doctorate
E) Ph.D/Ed.D
9. Have you received formal training in the area of selective mutism? Yes No

If yes, how many hours of training have you received?
10. What did the training consist of?
11. Would you be interested in learning more about this disorder?
Yes No
12. Approximately how many children with selective mutism (past or present) have you encountered in your professional practice?
13. What group(s) of professionals do you see as responsible for the diagnosis of selective mutism? (circle as many as apply)
A) Psychologists
B) Psychiatrists
C) Speech-language Pathologists
D) Special Education Teachers
E) Physicians
F) Other _____
14. What groups of professionals do you see as **primarily** responsible for the treatment of selective mutism? (circle only one)
A) Psychologists
B) Psychiatrists
C) Speech-language Pathologists
D) Special Education Teachers
E) Physicians
F) Other
15. On a scale of 1 to 8, rate your confidence in your ability to treat this disorder.
{-----}
- | | | | | | | | |
|---------------|---|-------------|---|-------------|---|-------------|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| very | | slightly | | moderately | | very | |
| uncomfortable | | comfortable | | comfortable | | comfortable | |

Appendix A - p. 2

16. Circle the treatment method you consider most appropriate for intervention of selective mutism. (circle only one)
1. Behavioral (use of behavioral modification, operant conditioning, shaping, response cost, etc.)
 2. Psychodynamic (counseling with the child to work through psychological problems and fears)
 3. Family Therapy (counseling in the areas of paternal conflict and the mother-child relationship)
 4. Speech-Language Therapy (desensitizing the child's hypersensitivity to speech and language)
 5. Pharmacotherapy (use of various drugs)
 6. Combination (Please specify what combination)
 7. Other_____
17. On a scale of 1 to 8, rate your confidence in your ability to make a differential diagnosis of selective mutism.
- {-----}
- | | | | | | | | |
|---------------|---|-------------|---|-------------|---|---|-------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| very | | slightly | | moderately | | | very |
| uncomfortable | | comfortable | | comfortable | | | comfortable |
18. Check all of the following disorders that are difficult for you to differentiate from selective mutism?
- A) Hearing Impairment
 - B) Serious Emotional Impairment
 - C) Autism
 - D) Mental Retardation
 - E) Shyness
 - F) Pervasive Developmental Disorder
 - G) Schizophrenia
 - H) Other_____

Appendix A - p.3

19. Following is a list of characteristics. In column A, please check all the characteristics you feel are associated with selective mutism. In column B, check all those you have actually observed in your clients with selective mutism.

	<u>A</u> Associated	<u>B</u> Observed
excessive shyness	[]	[]
social withdraw	[]	[]
separation anxiety	[]	[]
clinging behaviors	[]	[]
oppositional deviant disorder	[]	[]
obsessive compulsive disorder	[]	[]
negativism	[]	[]
grimacing	[]	[]
facial tics	[]	[]
enuresis/soiling	[]	[]
eating disorders/difficulties	[]	[]
sleeping disorders	[]	[]
depression	[]	[]
hyperactivity	[]	[]
passive/aggressive behaviors	[]	[]
mental retardation	[]	[]
hospitalization/trauma before age 3	[]	[]
parental conflict	[]	[]
maternal overprotection	[]	[]
family immigration	[]	[]
speech disorders	[]	[]
language disorders	[]	[]
avoidant disorder	[]	[]
social phobia	[]	[]

Thank you for your time!!!

Appendix B

December 20, 1997

Dear Survey Respondent,

My name is Sarah Toland. Currently, I am a graduate student in Communication Disorders and Sciences at Eastern Illinois University. I am conducting a master's thesis with Dr. Gail J. Richard. I am interested in finding out the extent to which the disorder of selective mutism is being seen and how it is being treated. I would also like to compare the difference in views and treatment strategies between speech-language pathologists and school psychologists.

Selective mutism is a disorder in which a child consistently refuses to speak in social situations, while demonstrating the ability to speak in other situations (typically at home). Selective mutism is not better accounted for by a communication disorder such as stuttering and does not occur solely with any psychotic disorder.

I truly appreciate your taking the time to complete the survey. Please return the completed survey in the pre-addressed envelope by February 1st.

☐ I would like a copy of the results.

☐ I would not like a copy of the results.

If you would like a copy, please enclose an address where the information can be sent. Once again, thank you for participating in this project.

Sarah M. Toland, B.A.
Graduate Student

Appendix C

School Psychologists' Identifying Information

<u>Location</u>	<u>Yrs. Exp</u>	<u>Frm. Trn.</u>	<u># clients seen</u>	<u>comf. tx</u>	<u>comf. dx</u>
61422 Bushnell	-	no	0	1	2
60477 Tinley Park	20	no	2	5	5
60022 Glencoe	5	no	3	3	3
60462 Orland Park	11	no	3	3	3
61726 Chenoa	22	no	4	4	5
62675 Pertersburg	7	no	0	1	1
60438 Lansing	2.5	no	1	2	3
60451 New Lennox	22	no	1	5	6
60613 Chicago	3	yes	2	5	7
60016 Des Plaines	21	no	1	3	-
60453 Oak Lawn	14	no	2	3	3
60611 Chicago	-	no	0	2	2
60008 Rolling Meadows	5	no	2	3	6
62249 Highland	21	no	2	2	2
62223 Belleville	1	no	0	1.5	2
60193 Schaumburg	2	no	0	1	1
62401 Effingham	4	no	0	4	3
60521 Hinsdale	20	no	1	2	3
61614 Peoria	35	no	5	5	6
61761 Normal	4	no	1	1	1
60060 Mundelein	19	no	0	2	2
61072 Rockton	21	no	2	7	6
60446	5	no	2	3.5	3.5
60618 Chicago	30	yes	4	6	7
61821 Chamgaign	50	no	10	5	6
62611 Arenzville	4	yes	0	3	3
61801 Urbana	9	no	2	4	4
60089 Buffalo Grove	8	no	1	4	7
62708 Springfield	35	no	3	3	4
62341 Hamilton	10	no	2	3	3
61520 Canton	37	no	0	4	4
62471 Vandalia	9	no	1	3	3
61761 Normal	1	no	0	3	3
60030 Grayslake	22	no	0	2	6
60462 Orland Park	4	no	1	2	2
60083 Wadsworth	-	yes	5	3	3
61201 Rock Island	15	no	1	3	3
60449 Monee	7	no	2	5	5
61244 East Moline	7	no	0	2	5
61032 Freeport	17	no	2	2	5
62401 Effingham	9	no	2	2	6
61548 Metamora	19	no	0	5	5
62024 East Alton	20	no	1	5	5
61920 Charleston	10	no	0	6	6
60201 Evanston	7	no	1	2	3
61021 Dixon	25	no	5	2	7
60174 Saint Charles	-	no	3	4	6
60457 Oak Lawn	16	no	0	1	1
60477 Tinley Park	-	no	2	3	3
62294 Troy	13	no	2	5	6
61866 Rantoul	1	no	1	2	2
60523	18	no	1	2	2
-	-	no	1	3.5	3.5
60472 Flossmoor	2	no	1	2	-
61036 Galena	23	no	2	5	5
62321 Carthage	1.5	no	1	1	5
60107 Streamwood	7	no	1	2	3
62557 Pana	4	no	0	3	2
60417 Crete	30	no	1	1.5	2
60089 Buffalo Grove	18	no	1	1	6

62298	Waterloo	-	no	1	3	2
60901	Kankakee	35	no	5	4	4
60062	Northbrook	5	yes	1	3	3
60443	Matteson	18	no	0	2	2
60540	Naperville	14	no	4	3	4
62361	Pearl	16	no	3	3	3
62025	Edwardsville	19	no	3	5	7
60005	Arlington Heights	14	no	0	2	2
60061	Vernon Hills	21	no	4	4	5
60172	Schaumburg	5	no	1	3	3
61111	Loves Park	5	no	1	3	6
60647	Chicago	3	no	0	1	2
60613	Chicago	2	no	1	4	3
60015	Deerfield	1	no	1	4	6
60035	Highland Park	-	no	1	3	3
60014	Crystal Lake	17	no	3	5	5
60102	Algonquin	8	no	1	2	3
60203	Evanston	20	no	3	5	5
62220	Belleville	-	no	3	4	5
62966	Murphysboro	13	no	3	4	5
60302	Oak Park	25	no	0	1	1
60638	Chicago	6	no	2	3	3
60525	La Grange	12	no	3	2	3
60515	Downers Grove	23	no	10	3	6
60540	Naperville	17	no	0	1	1
60540	Naperville	-	no	0	3	-
60565	Naperville	16	no	1	2	3
60628	Chicago	2.5	no	1	2	2
61501	Astoria	4	no	1	3	5
61483	Toulon	20	no	3	1	2
61938	Mattoon	1	no	0	1	1
60532	Lisle	10	no	3	5	5
60532	Lisle	3	no	0	2	2
60118	Dundee	15	no	1	6	7
62234	Collinsville	15	no	3	3	3
60025	Glenview	22	no	2	3	3
61537	Henry	-	no	1	5	5
60453	Oak Lawn	5	no	1	3	1
60083	Wadsworth	12	no	2	3	3
60655	Chicago	5	no	0	2	3
60622	Chicago	2	no	0	2	2
60565	Naperville	6	no	3	3	1
60013	Cary	16	no	1	1	1
62626	Carlinville	10	no	2	3	5
60091	Wilmette	30	no	2	7	7
60510	Batavia	10	no	3	2	4
60646	Chicago	6	no	3	3	4
60090	Wheeling	18	no	3	2	2
62221	Belleville	13	no	1	2	2
60410	Channahon	-	no	2	4	5
62358	Niota	-	no	1	6	6
60647	Chicago	-	no	0	3	2
60004	Arlington Heights	-	no	1	3	3
60441	Lockport	5	no	1	2	2
60625	Chicago	-	no	3	3	5
60202	Evanston	.5	no	1	1	2.5
60074	Palatine	20	no	0	1	1
60014	Crystal Lake	7	no	1	1	1
62234	Collinsville	20	no	6	5	3

Appendix D

Speech-Language Pathologists' Identifying Information

<u>Location</u>	<u>Yrs. Exp</u>	<u>Frm. Trn.</u>	<u># clients seen</u>	<u>comf. tx</u>	<u>comf. dx</u>
61920 Charleston	21	no	3	6	5
60033 Harvard	10	no	0	2	3
60181 Villa Park	6	no	5	2	4
60187 Wheaton	23	no	1	1	3
60011 Barrington	36	no	2	3	3
60618 Chicago	15	no	6	2	3
61853 Mahomet	29	no	0	1	1
61776 Towanda	8.5	no	0	2	3
60035 Highland Park	20	no	2	5	5
60558 Western Springs	20	no	0	1	1
60526 La Grange	24	no	1	3	5
61820 Champaign	17	no	2	3	6
61951 Sullivan	1	yes	0	7	6
60504 Aurora	1	no	1	3	6
60015 Deerfield	8	no	0	3	2
60565 Naperville	7	no	1	2	4
60477 Tinley Park	29	no	4	4	4
61070 Rock City	22	yes	3	6	6
60457 Oak Lawn	12	yes	4	6	6
60411 Chicago Heights	20	no	0	2	2
60430 Homewood	22	no	1	3	5
60093 Wheeling	10	no	0	2	1
60126 Elmhurst	28	no	0	2	1
60510 Batavia	14	no	3	1	7
60438 Lansing	4	no	1	3	3
60565 Naperville	13	no	0	1	1
60103 Bartlett	8	no	2	2	3
60031 Gurnee	12	no	3	3	4
60188 Carol Stream	15	yes	2	2	3
60634 Chicago	.5	yes	0	3	3
60061 Vernon Hills	20	no	2	2	2
62221 Belleville	10	no	3	5.5	6
60060 Mundelein	17	no	0	2	2
60010 Barrington	8	no	2	3	3
60076 Skokie	20	yes	1	5	3
60005 Arlington Heights	12	no	4	3	5
61114 Rockford	20	no	3	4	3
60005 Arlington Heights	5	no	1	2	5
60048 Libertyville	20	no	1	1	2
62258 Mascoutah	27	no	4	6	6
60148 Lombard	21	no	2	3	2
62034 Glen Carbon	30	yes	2	4	1
60062 Northbrook	27	no	10	7	8
61104 Rockford	20	no	8	6	6
60565 Naperville	17	no	1	3	1
60563 Naperville	10	no	2	3	2
60134 Geneva	36	no	2	5	6
60101 Addison	30	no	3	2	3
60564 Naperville	19	no	1	2	3
60515 Downers Grove	25	no	1	3	3
60463 Palos Heights	24	no	0	1	1
60005 Arlington Heights	15	no	2	3	3
-	14	no	2	4	4
60050 McHenry	24	no	1	6	6
60099 Zion	18.5	no	2	5	3
60453 Oak Lawn	22	no	1	1	3
60115 DeKalb	42	no	9	8	8
62049 Hillsboro	8	no	5	5	5

60047	Lake Zurich	8	no	1	5	4
60208	Evanston	25	no	1	5	5
60614	Chicago	12	no	2	5	4
60451	New Lennox	27	no	0	1	1
60435	Joliet	25	no	0	3	3
60305	River Forest	20	no	2	4	3
60191	Wood Dale	23	no	4	4	4
60423	Frankfort	10	no	0	1	1
62424	Dieterich	18	yes	5	3	3
60084	Wauconda	9	no	4	3	3
60061	Vernon Hills	10	no	0	2	2
-		27	no	2	2	2
60435	Joliet	4.5	no	0	2	2
60099	Zion	7	no	2	1	1
60126	Elmhurst	33	no	4	7	7
60435	Joliet	-	no	1	7	6
62233	Chester	12	no	0	1	1
60440	Bolingbrook	11	no	4	3	3
60805	-	8	no	0	1	1
61108	Rockford	8	no	5	5	5
61704	Bloomington	-	no	1	4	3
60901	Kankakee	16	no	1	3	1
60464	Palos Park	11	no	0	5	3
60193	Schaumburg	31	no	2	1	5
60614	Chicago	40	no	25	5	6
60015	Deerfield	4	no	0	1	4
60643	Chicago	7.5	yes	3	3	2
60504	Aurora	25	no	1	3	3
60645	Chicago	18	no	3	3	4
60123	Elgin	30	no	0	4	4
-		10	yes	2	6	6
61265	Moline	23	no	5	6	6
-		10	no	3	2	4
60154	Westchester	16	no	10	7	6
60302	Oak Park	12	no	2	3	4
60655	Chicago	16	no	1	2	3
60035	Highland Park	15	no	2	3	1
60655	Chicago	15	no	3	2	3
62401	Effingham	3	no	3	5	6
60061	Vernon Hills	8	no	0	3	2
62301	Quincy	-	no	0	2	2
60053	Morton Grove	18	no	2	6	5
60517	Downers Grove	-	no	1	3	3
60451	New Lennox	25	yes	0	1	1
61920	Charleston	6	no	3	5	5
60201	Evanston	43	no	15	4	4
60655	Chicago	20	no	0	1	1
60462	Orland Park	-	no	2	5	5