Practical Guidelines for the Assessment and Treatment of Selective Mutism

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ABSTRACT

Objective: To provide practical guidelines for the assessment and treatment of children with selective mutism, in light of the recent hypothesis that selective mutism might be best conceptualized as a childhood anxiety disorder. **Method:** An extensive literature review was completed on the phenomenology, evaluation, and treatment of children with selective mutism. Additional recommendations were based on clinical experience from the authors' selective mutism clinic. **Results:** No systematic studies of the phenomenology of children with selective mutism were found. Reports described diverse and primarily noncontrolled treatment approaches with minimal follow-up information. Assessment and treatment options for selective mutism are presented, based on new hypotheses that focus on the anxiety component of this disorder. Ongoing research suggests a role for behavior modification and pharmacotherapy similar to the approaches used for adults with social phobia. **Conclusion:** Selectively mute children deserve a comprehensive evaluation to identify primary and comorbid problems that might require treatment. A school-based multidisciplinary individualized treatment plan is recommended, involving the combined effort of teachers, clinicians, and parents with home- and clinic-based interventions (individual and family psychotherapy, pharmacotherapy) as required. *J. Am. Acad. Child Adolesc. Psychiatry,* 1995, 34, 7:836–846. **Key Words:** selective (or elective) mutism, child, anxiety disorders, social phobia, pharmacotherapy, speech and language.

Selective mutism is a disorder of childhood characterized by the total lack of speech in at least one specific situation (usually the classroom), despite the ability to speak in other situations. Recently there has been a shift in the etiological views on selective mutism, deemphasizing psychodynamic factors and instead focusing on biologically mediated temperamental and anxiety components (Black and Uhde, 1992; Crumley, 1990; Golwyn and Weinstock, 1990; Leonard and Topol, 1993). Reports in the literature, in addition to our clinical work, suggest that selective mutism may be the manifestation of a shy, inhibited temperament, most likely modulated by psychodynamic and psychosocial issues and in some cases associated with neuropsychological delays (developmental delays, speech and language disabilities, or difficulty processing social cues) (Fig. 1). Although systematic study of this hypothesis is still needed, cognitive-behavioral treatment interventions, in addition to pharmacotherapy, have become more common than traditional psychodynamic approaches. The intent of this article was to provide practical guidelines for the assessment and treatment of selective mutism based on our clinical experience along with reports from the literature.

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BACKGROUND

History and Definition

In the latter part of the 19th century, Kussmaul (1877) described a disorder in which people would not speak in some situations, despite having the ability to speak. Kussmaul named this disorder "aphasia voluntaria," thereby emphasizing what he thought was

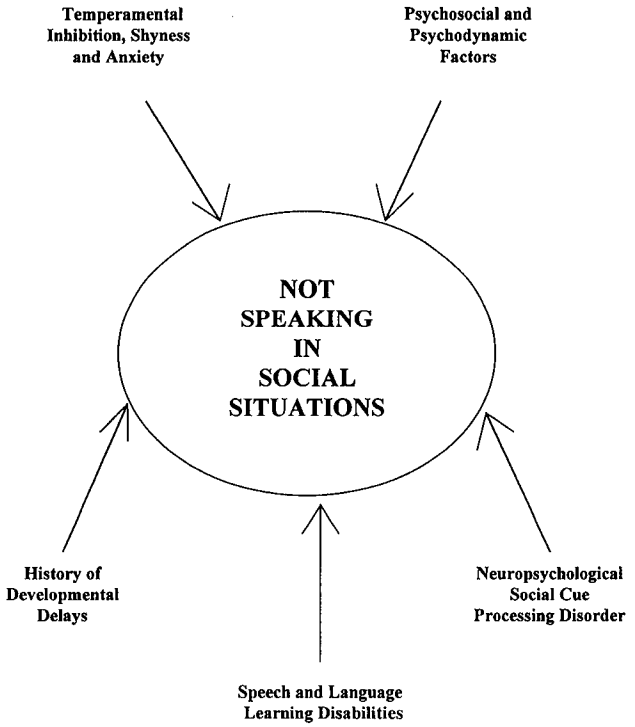

Fig. 1 Factors that may influence speech and social inhibition.

a voluntary decision not to speak. When Tramer (1934) observed the same symptoms, he called the problem "elective mutism," with the belief that these children were "electing" not to speak. The most recent edition of the *Diagnostic and Statistic Manual of Mental Disorders* (*DSM-IV*) (American Psychiatric Association, 1994) has adopted a new term: "selective mutism." The change from "elective" to "selective" (implying that the children do not speak in "select" situations) is consistent with new theories of etiology that deemphasize oppositional behavior and instead focus more on anxiety issues. The diagnosis of selective mutism, however, revolves around only one primary symptom: "consistent failure to speak in specific social situations . . . despite speaking in other situations" (American Psychiatric Association, 1994, p. 115). Additional criteria require that the symptom last at least 1 month, be severe enough to interfere with educational or occupational achievement, and not be due to another problem (such as insufficient knowledge of the language, a communication disorder, pervasive developmental disorder, schizophrenia, or another psychotic disorder). Despite these criteria, the population of children with selective mutism remains heterogeneous, which could complicate treatment recommendations.

Differential Diagnosis

Since speech inhibition can be a secondary symptom of many other psychiatric disorders (including pervasive developmental disorder, schizophrenia, and severe mental retardation), differential diagnosis for selective mutism can be complex (American Psychiatric Association, 1994). When a communication disorder is present, distinguishing between symptoms that are secondary to speech and language problems and those that are suggestive of selective mutism may be even more difficult. Although speech and language deficits can cause speech inhibition (Lerea and Ward, 1965), several authors have reported that speech and language problems can also exist comorbidly with selective mutism (Kolvin and Fundudis, 1981; Wilkins, 1985; Wright, 1968).

Epidemiology

Selective mutism has been described as a rare disorder, affecting fewer than 1% of school-age children, but little systematic research has been done to support this estimate. Using fairly strict diagnostic criteria, Fundudis and colleagues (1979) identified two selectively mute children in a survey of 3,300 seven-year-olds in Newcastle, U.K., a rate of 0.06%. In contrast, Brown and Lloyd (1975) reported a much higher prevalence of 0.69% (42/6,072 children). However, this estimate was obtained after only 8 weeks of school, and 56 weeks later, the rate had fallen to 0.02% (1/6,072 children).

Etiology

Etiological explanations for selective mutism have varied widely (Leonard and Dow, 1995). Some have explained it as a response to family neurosis, usually characterized by overprotective or domineering mothers and strict or remote fathers (Browne et al., 1963; Meijer, 1979; Meyers, 1984; Parker et al., 1960; Pustrom and Speers, 1964). Others have suggested that the symptom could be a manifestation of unresolved psychodynamic conflict (Elson et al., 1965; Youngerman, 1979). In addition, some have reported that it may develop as a reaction to trauma, such as sexual abuse or early hospitalization (MacGregor et al., 1994). Divorce, death of a loved one, and frequent moves have also been postulated to play a role in symptom development.

In the more recent literature, authors have noted a resemblance between selectively mute children and socially phobic adults (Black and Uhde, 1992; Crumley, 1990; Golwyn and Weinstock, 1990; Leonard and Topol, 1993). Crumley (1990) reported the case of a 29-year-old man who had been selectively mute at age 8½years. The man remembered being afraid to speak for fear that he "might say or do the wrong thing" (Crumley, 1990, p. 318). He also described experiencing "sudden episodes of intense anxiety" and physical symptoms that were suggestive of panic (shortness of breath, palpitations, dizziness) when he was placed in a situation where speech was expected. As an adult, the patient still had anxiety in social situations and often would not initiate conversation for fear that he would "say the wrong thing and embarrass myself" (Crumley, 1990, p. 319). Crumley speculated that the patient's problems with social phobia might have been related to his initial elective (selective) mutism symptoms.

Black and Uhde (1992) described a selectively mute girl who had told her mother that she was reluctant to speak because "her voice sounded funny and she did not want others to hear it" (Black and Uhde, 1992, p. 1090). Her family psychiatric history was remarkable for paternal public-speaking anxiety and maternal childhood shyness. Boon (1994) reported the case of a 6-year-old girl who did not speak to adults. She explained her inability to speak by saying, "my brain wouldn't let me; my voice sounds strange" (Boon, 1994, p. 283). The girl's father was in treatment for panic disorder, and her paternal grandfather had had an anxiety disorder. Boon (1994, p. 283) speculated that research on the pharmacotherapy of selective mutism " . . . likely will support the view that elective mutism is an anxiety/OCD spectrum disorder."

Phenomenology

Several authors found selective mutism to be more prevalent in females than males (Hayden, 1980; Wergeland, 1979; Wilkins, 1985; Wright, 1968). However, others found the disorder only slightly more frequent in females (Brown and Lloyd, 1975; Kolvin and Fundudis, 1981), and some found no sex difference (Parker et al., 1960). Onset is usually insidious, with parents reporting that the child "has always been this way" (Hayden, 1980; Kolvin and Fundudis, 1981; Leonard and Topol, 1993; Wright, 1968; Wright et al., 1985), but the diagnosis is often not made until the child enters kindergarten or first grade and verbal skills become more essential (5 to 6 years old).

Nearly all descriptions of selectively mute children in the literature have included some reference to their shyness, inhibition, or anxiety. Some have described them as " . . . particularly sensitive, shy, afraid of everything strange or new . . ." (Wergeland, 1979, p. 219), others called them "unduly timid and sensitive" (Morris, 1953, p. 667), and others reported "shy, timid, clinging behavior away from home" (Hayden, 1980, p. 128). One author went so far as to characterize them as not only shy, but actually "socially inept" (Friedman and Karagan, 1973, p. 250). Our clinical experience with selectively mute children has suggested that anxiety may play a much larger role than previously acknowledged, and these reports support such a hypothesis.

A wide variety of comorbid psychiatric problems have been described in children with selective mutism. Kolvin and Fundudis (1981) reported an increased incidence of elimination problems (as high as 42% for enuresis and 17% for encopresis, versus 15% and 2% for controls). Others found obsessive-compulsive features (Hayden, 1980; Kolvin and Fundudis, 1981; Wergeland, 1979), school phobia (Elson et al., 1965; Parker et al., 1960; Pustrom and Speers, 1964; Wright, 1968), and depression (Wilkins, 1985).

Although there have been no reports of systematic speech and language assessment, several authors have noted speech delays or problems among selectively mute children. Kolvin and Fundudis (1981) reported that the 24 selectively mute children in their study began speaking significantly later than 102 matched controls (27.3 months versus 21.9 months; no p value given). In addition, half (12/24) of these same selectively mute children had immaturities of speech at the time of evaluation, whereas only 9% (9/102) of the normal controls had any such problems. Wilkins (1985) reported that 6 (25%) of the 24 selectively mute children he studied had a delayed onset of speech and 2 (8.3%) had speech problems at the time of evaluation, while no such problems were found in any of the controls. Wright (1968) found articulation problems in 5 (21%) of his 24 patients, one of whom was dysarthric. Of note, these authors measured speech problems only and gave no reports of linguistic ability.

Preliminary data from comprehensive speech and language assessments of selectively mute children evaluated in our clinic reveal that just less than one half had mild to moderate expressive or receptive language delays severe enough to warrant intervention (unpublished data). It appears that the rate of speech and language delays in the selectively mute population (and the impact of such delays) merits further investigation.

ASSESSMENT

Any child who is being considered for a diagnosis of selective mutism should have a comprehensive evaluation to rule out other explanations for the mutism and to assess comorbid factors. An individualized treatment plan can then be developed.

Parental Interview

Since most selectively mute children will not speak to clinicians, an interview with the parent or guardian of the child can provide essential information (Table 1).

A description of the child's symptom history, particularly onset (sudden or insidious), may help establish the diagnosis of selective mutism. Any patterns of behavior that are not characteristic of selective mutism, such as not talking to immediate family members, abrupt cessation of speech in one environment, or absence of speech in all settings, raise concerns about other neurological or psychiatric problems (e.g., autism, aphasia). A history of neurological insult, developmental delays, neuropsychological deficits, and/or atypical speech and language difficulties (such as problems with prosody) could be suggestive of Asperger's disorder, right hemisphere deficit disorder, or social emotional learning disabilities, rather than selective mutism (Voeller, 1986; Weintraub and Mesulam, 1983). Children with these disorders often have symptoms of shyness and social isolation and thus may appear similar to selectively mute children, but research suggests that their symptoms are based on an inability to process social cues.

Also of interest is the degree to which the child is verbally and nonverbally inhibited. Some selectively mute children are shy and anxious in unfamiliar environments, while others will interact in some way even if they will not speak (perhaps by nodding their head or smiling). Targeted questions about the child's verbal and nonverbal interaction, relationships with friends, and anxiety in social situations can be revealing. The child's social interaction outside of school, such as in a restaurant or on the telephone, should also be explored.

A structured diagnostic interview, such as the Diagnostic Interview for Children and Adolescents-Parent version (Herjanic and Campbell, 1977) or the Schedule for Affective Disorders and Schizophrenia for School-Age Children-Epidemiologic Version (Orvaschel and Puig-Antich, 1987) can be helpful for assessment of comorbid psychiatric symptoms. Pervasive developmental disorder, schizophrenia, and mental retardation can cause speech inhibition and thus might rule out a diagnosis of selective mutism.

Academic ability should also be discussed. Because it is difficult to evaluate children with selective mutism via traditional testing, minor learning disabilities may be overlooked. Parent and teacher comments, academic reports, and standardized testing results can all be helpful to evaluate the child's skills and determine whether further testing is indicated.

Reviewing the child's medical history is essential because physical problems might underlie the child's mutism. Neurological injury or delay can result in speech and language problems or social skills deficits, both of which can exacerbate speech inhibition. In addition, some authors have reported that early hospitalizations or abuse may play a role in the development of selective mutism (MacGregor et al., 1994). Hearing should also be checked (particularly if the child has a history of frequent ear infections), since hearing problems are sometimes associated with learning and language delays.

Family history of selective mutism, extreme shyness, or anxiety disorders (social phobia, panic disorder, obsessive-compulsive disorder) may put the child at risk for developing similar problems and should be thoroughly explored with the parents. In addition, a complete family history of any psychiatric or medical diagnoses, including response to treatment, can be helpful.

Evaluation of speech and language ability is essential. Factors that might have influenced a child's language development, such as a parent with identified speech and language problems, or a lack of adequate exposure to the language (as in some bilingual homes), should be considered. Inadequate or confusing language exposure may result in expressive problems, and additional practice may be necessary for the child to function at

TABLE 1
Assessment of Selectively Mute Children

Areas	Parental Interview	Clinical Interview
Symptoms	• Type of onset (insidious, sudden) • Past treatments and efficacy • Where and to whom the child will speak	• Observations from interacting with the child
Social interaction	• Ability to make and keep friends • Extent and pattern of participation in social activities • Degree of shyness/inhibition in familiar and foreign settings • Individuals to whom child will speak • Ability to communicate needs	• Observations of temperament made during interaction with child (shy? anxious? inhibited? interactive?)
Psychiatric	• Detailed assessment of psychiatric symptoms (use of a structured interview is preferred by some) • Family history of psychiatric problems and excessive shyness • Temperament during developmental stages	• Mental status examination
Medical	• Child's medical history, including illnesses or hospitalizations • Prenatal and perinatal history • Developmental history • Family medical history	• Physical examination, (including screening for neurological or oral-sensorimotor problems)
Audiological	• Frequency of otitis media • Any reported concerns about hearing problems	• Peripheral sensitivity (pure-tone and speech stimuli) • Tympanometry and acoustic reflex (for middle ear)
Academic and cognitive	• Review of academic achievement (grades, teacher reports)	• Standardized tests of cognitive skills and achievement
Speech and language	• Reported complexity and fluency of child's speech at home • Nonverbal communication (gestures, etc.) • Any history of speech and language delays • Detailed description of child's speech production, language use and comprehension • Discussion of environmental influences on language learning (bilingualism, etc.)	• Receptive language: assess using standardized tests • Expressive language: assess using audiotape and standardized testing, if possible (note lengh of utterances grammatical complexity, tone of voice) • Speech: assess using audiotape (note fluency, pronunciation, rhythm, stress, inflection, pitch, volume)

normal levels. Other questions should focus on the child's ability to communicate his or her needs, both verbally and nonverbally. Descriptions of the complexity and quality of language (mean length of utterance, range of vocabulary, use of difficult verb tenses and complicated grammar) can help one evaluate expressive language ability. Pragmatic language abilities, such as turn-taking in conversation, understanding of nonverbal communicative cues, and so on, should also be explored. Other questions might focus on the child's speech production (voice, fluency, resonance, rate, and rhythm), to identify phonological problems. It can also be helpful to have parents provide an audiotape of the child speaking at home (as detailed later), because few children with selective mutism will actually speak to clinicians.

Many checklists have been used to assess speech and language ability, including the Classroom Communica-

tion Checklist (Ripich and Spinelli, 1985), the Interpersonal Language Skills Checklist (McConnell and Blagden, 1986), and the Environmental Language Inventory (MacDonald, 1978). We adapted these scales to create the National Institutes of Health Parent Checklist (Sonies et al., 1993; available upon request), which augments information provided by standardized speech and language testing. In this questionnaire, parents are asked to respond to statements regarding the expressive, receptive, and pragmatic abilities of their child, indicating frequency (never, rarely, sometimes, frequently, or always). This checklist, or others, can be used to supplement standardized speech and language testing.

Child Assessment

Interviewing the child is a crucial part of the assessment as it allows the clinician to directly observe the severity and nature of the child's mutism, as well as to pursue any concerns raised by the parents (Table 1).

Temperament, quality of interaction, and ability to communicate verbally and nonverbally can all be observed during the interview with the child. As most selectively mute children will not talk to the clinician, other forms of nonverbal communication (playing, drawing) may be used to assess anxiety or shyness in social situations. Some selectively mute children will avoid eye contact and withdraw from social situations, while others are more interactive and will smile, giggle, and nod answers to questions, even if they will not speak.

A review of the physical examination will ensure that the child has no medical problems that could potentially complicate the clinical picture. Oral sensory and motor ability should be evaluated, with particular note to any orofacial abnormalities that might interfere with articulation. Neurological difficulties, as evidenced by drooling, grimacing, muscular asymmetry, tongue and lip weakness, abnormal gag reflex, or impaired sucking or swallowing, can be relevant because they may impede the movements necessary for normal speech.

Auditory testing should be completed to ensure that hearing difficulties are not contributing to the mutism. Several studies have shown that even mild audiological impairments can have a negative effect on speech and language development (Fundudis et al., 1979). General tests of peripheral sensitivity (using both pure-tone and speech stimuli) are usually adequate to detect problems. In addition, tympanometry and acoustic reflex testing can be used to assess middle ear function.

Standardized psychological testing may be necessary to confirm parental and teacher reports of the child's cognitive abilities, particularly because many of these children are difficult to assess academically. While learning disabilities are rarely the cause of mutism, they could exacerbate the problem. Tests of intellectual capacity (which measure components of memory, attention, reasoning, and judgment) can be invaluable toward obtaining a measure of the child's potential level of functioning. Many different tests are available, but the performance section of the WISC-R (Wechsler, 1974) and Raven's Colored Progressive Matrices (Raven, 1976) were found to be good measures of cognitive ability in our selective mutism clinic since children were not required to respond orally.

A formal speech and language evaluation, including components of receptive language, expressive language, and phonology, is an essential part of the assessment. While speech and language are closely tied, they are separate entities and thus require different types of assessment. Speech is " . . . the activity of articulating speech sounds," while language involves higher cortical functioning: " . . . the communication of thoughts by the use of meaningful units combined in a systematic way" (Bishop, 1994, p. 556). A complete evaluation of the child's ability will utilize several different approaches, combining standardized testing with information obtained from the parents, as well as an audiotape of the child speaking at home.

Most of the children referred to our selective mutism clinic had never received formal speech and language testing, perhaps in part because of a misconception that nonverbal children cannot be evaluated for speech and language functioning. Several tests of receptive language ability that can be administered to nonverbal subjects are available. The Peabody Picture Vocabulary Test (Dunn and Dunn, 1981) is useful as an initial screening for receptive language problems, since it can be administered nonverbally and it has been standardized for children as young as 2 years old. To evaluate more complex receptive ability, one could use a variety of other tests, including (but not limited to) the Token Test for Children (DiSimoni, 1978), the Test for Auditory Comprehension of Language-Revised (Woolfolk, 1985), the Test of Language Development (Hammil and Newcomer, 1982), and the Detroit Test of

Learning Aptitude-Primary (Hammil and Bryant, 1986). For less responsive or immature children, the Utah Test of Language Development (Mecham and Jones, 1989) or the Preschool Language Scale-3 (Zimmerman et al., 1991) might be more appropriate.

A prerecorded audiotape of the child speaking at home can be used to evaluate phonological ability, including length of utterances, grammatical construction, tone of voice, and response to verbalizations. In addition, one should be alert for any abnormalities of rhythm, stress, inflection, pitch, or volume. Speech defects have been noted to cause speech inhibition in some cases and thus could exacerbate the symptoms of selective mutism (Lerea and Ward, 1965).

TREATMENT

Treatment for selective mutism has for a long time been considered difficult; some have described the disorder as "intractable." Many different approaches have been used to treat this disorder, including a variety of behavioral techniques, psychodynamic approaches, family therapy, speech therapy, and most recently pharmacological intervention (for reviews, see Cline and Baldwin, 1994; Kratochwill, 1981; Tancer, 1992). Unfortunately, the majority of treatment reports have been in case study format, many with only a single subject. While case studies may be helpful to describe a new approach or intervention, generalizing from such reports can be problematic. In many of these reports, procedures were not sufficiently described to allow for replication, outcome measures were not objective or standardized, alternative explanations for symptom remission were not explored, and unsuccessful cases were not reported (Wells, 1987).

Some authors have attempted to increase validity using a more systematic case study approach, the "single-case experimental design" (Bauermeister and Jemail, 1975; Cunningham et al., 1983). For example, objective symptom measures (such as number of words spoken per hour) have been used to quantify outcome, and treatment results have been compared to baseline. A few authors have even used multiple baselines (home, school, other settings). However, single-case experimental design is still limited by small sample size, and systematic trials with larger groups are needed. Only two controlled studies of treatment for selective mutism were found in the literature, one using behavioral therapy (Calhoun and Koenig, 1973) and the other using pharmacotherapy (using fluoxetine) (Black and Uhde, 1994). Both studies reported success in the treated group, as detailed in later sections.

Behavioral

Behavioral interventions, based on principles of learning theory, have been the most frequently used treatment for selective mutism. Reed (1963) was one of the first to suggest that mutism could be a learned behavior and thus might respond to behavioral techniques such as reinforcement and stimulus fading. He hypothesized that mutism developed either as a means of getting attention or as an escape from anxiety. Treatment was thus directed at extinguishing all reinforcement for the mutism, while simultaneously bolstering self-confidence and decreasing anxiety (Reed, 1963).

There have been many subsequent attempts to use behavioral techniques to encourage speech in selectively mute children (the reader is referred to Cunningham et al., 1983; Labbe and Williamson, 1984; and Sanok and Ascione, 1979, for reviews). However, the only controlled study of behavioral therapy to date was that of Calhoun and Koenig (1973), which involved eight selectively mute children. In this study, children were randomly assigned to treatment or control groups, and data (number of words per 30 minutes) were collected by trained observers at baseline, posttreatment, and follow-up. Although treatment was not described in sufficient detail to assess or replicate, it appeared to consist of teacher and peer reinforcement of verbal behavior. Subjects who received active treatment were found to have significantly more vocalizations than untreated subjects 5 weeks after the start of treatment ($p < .01$), but improvement was not significant at follow-up 1 year later ($p < .10$).

In addition to this controlled study, there are numerous case reports of behavioral treatment for selective mutism. Most authors used some type of reinforcement for speaking, often combined with an absence of reinforcement for the mute behavior. Some also used punitive measures (forcing the child to sit in the corner, splashing the child with water), but these may have a tendency to increase a child's anxiety and thus would not be recommended. Stimulus fading, a technique similar to the "desensitization" used to treat social phobia, has also been reported to be an effective

approach, particularly when combined with reinforcement (the reader is referred to Heimberg and Barlow, 1991, for a review of cognitive-behavioral therapy for social phobia in adults). In stimulus fading, therapists set simple goals and then gradually increase the difficulty of the task. For example, Scott (1977) used this approach with a 7-year-old girl, gradually adding new people into a room in which the girl was speaking. Three months after the end of treatment, Scott reported that, although she " . . . will always be a shy child and will possibly experience difficulty in communication . . . the problem of mutism no longer exists" (Scott, 1977, pp. 269-270).

Other authors have reported on the effectiveness of techniques such as "shaping" to initiate speech in the school setting (Austad et al., 1980). Shaping is a procedure in which the therapist reinforces mouth movements that approximate speech until true speech is achieved. "Self-modeling," a technique in which the child watches videotaped segments of himself or herself performing desired behaviors (speaking, interacting), has also been tried with some success, though only with case studies (Dowrick and Hood, 1978; Pigott and Gonzales, 1987).

Psychodynamic

While insight-oriented psychodynamic therapy was at one time the preferred treatment for selective mutism, cognitive-behavioral approaches are now being used with increasing frequency. Psychodynamic theory characterizes mutism as a manifestation of intrapsychic conflict, and treatment is focused on identifying and resolving such underlying conflicts. The treatment process can be time consuming, particularly if the child will not speak, and as a result many psychodynamic therapists have utilized art or play to facilitate communication and expedite therapy (Landgarten, 1975).

Family Therapy

In older reports, family pathology was often postulated to be a causal factor in the development of selective mutism (Goll, 1979; Lindblad-Goldberg, 1986; Meijer, 1979; Meyers, 1984; Pustrom and Speers, 1964). Authors described patterns of interaction in the family which seemed to encourage the child's mutism and thus prevent resolution of the symptom (Meyers, 1984). Family therapy was used to identify and treat such dysfunctional patterns. Although no systematic research has been done using family therapy as the primary intervention for selective mutism, reports suggest that this approach can be effective in some cases (Goll, 1979).

More recently, clinicians have not seen the child's symptom as a result of family pathology, but rather they have tried to involve family members in the design and implementation of a treatment plan. However, if family problems are identified that may be having an impact on the child's symptoms, a more traditional, insight-oriented family treatment approach could be appropriate.

Pharmacotherapy

There are a few recent reports of pharmacological treatment for selective mutism, all using medications which have been helpful for social phobia (selective serotonin reuptake inhibitors). Golwyn and Weinstock (1990) described a 7-year-old girl with elective mutism and "associated shyness" who responded to phenelzine (up to 2 mg/day) with improvement noted as early as 6 weeks. She progressed from not speaking a word at school to being able to talk freely to teachers, peers, and therapists. Her father had panic disorder and had responded to phenelzine. Black and Uhde (1992) described a 12-year-old girl with elective mutism and social anxiety who responded to fluoxetine (20 mg/day): she was able to speak freely with adults and peers at school, and the response was maintained at 7 months. Boon (1994) reported "positive effects" in the fluoxetine treatment of a 6-year-old selectively mute girl but did not provide details.

Black and Uhde (1994) recently completed a 12-week trial of fluoxetine in children with elective mutism (placebo-controlled, parallel design). The six children taking active medication showed significant improvement on some ratings of mutism and anxiety but not on others, and subjects in both groups were still judged to be symptomatic at the conclusion of the study. Although interesting and somewhat promising, these results suggest that perhaps a longer trial, a more individualized dosage schedule, or combined intervention should be considered. In obsessive-compulsive disorder, a combination of pharmacotherapy and behavioral intervention is the treatment of choice (Leonard et al., 1994). Several investigators are currently studying the efficacy of serotonin reuptake inhibitors

for the treatment of selective mutism, specifically fluoxetine and fluvoxamine. A medication trial should be considered if anxiety is a prominent factor or if symptoms have been resistant to other treatment attempts.

Speech Therapy

Several authors have noted an increased prevalence of speech and language problems in the selectively mute population (Kolvin and Fundudis, 1981; Wilkins, 1985; Wright, 1968). Smayling (1959) was the first to use speech therapy as the primary intervention for selective mutism, speculating that "speech defects, while not demonstrably the sole etiological factor, were causally related to the mutism" (p. 58). In Smayling's report, six selectively mute children who had some degree of speech or language disability were treated with half-hour sessions of speech therapy two to three times per week until the problems were resolved (2 to 21 months). Therapists intentionally avoided mentioning the mutism or discussing the child's feelings, instead focusing on articulation and language training. Once the speech problems had been corrected, five of the six children began to speak in school. Strait (1958) also used speech therapy, but in conjunction with behavioral modification techniques such as reinforcement. Though both Smayling and Strait studied children with identified speech and language problems, it is likely that any selectively mute child could benefit from structured language practice.

School-Based Multidisciplinary Individualized Treatment Plan

An effective individualized treatment program could be implemented in the school environment, with the coordinated efforts of parents, clinicians, and teachers. The goal of a treatment program should be to decrease the anxiety associated with speaking while encouraging the child to interact and communicate (Table 2).

Interventions that could be easily carried out by the classroom teacher include separating the class into small groups and identifying supportive peers. In some cases, an alternate means of communication (such as cards or gestures) might initially be necessary to allow the child to communicate basic needs. Any such system should be kept simple, however, so the child will still have incentive to communicate verbally.

Behavioral approaches can be helpful for encouraging the child to interact both verbally and nonverbally. At the start of a behavioral program, expectations should be kept low, perhaps rewarding the child for behaviors that he or she has already mastered or that are within reach. Once the child has gained confidence in his or her ability, the difficulty of the desired behavior can be increased. For example, one might begin by rewarding the child for whispering a single word and gradually increase the expectations until the child is saying the word in a normal volume. The type of reward could also be chosen according to the child's preferences (favorite candy, social praise, etc.). Once the child has become comfortable speaking in one environment, attempts can be made to generalize speech to other individuals or environments, using techniques such as stimulus fading.

The assistance of a speech therapist could be helpful in the development of a behavioral program for selective mutism, even if no specific speech and language impairments have been identified. Some selectively mute children have reported that they are afraid they will say the wrong thing or that their voice sounds funny, and speech and language practice could help such children gain confidence in their linguistic ability. Treatment might focus on perfecting pronunciation skills, increasing comprehension, and learning pragmatic skills, such as turn-taking during conversation. Practicing real-life interchanges until they have become automatic and less stressful might eventually help reduce a child's social inhibitedness.

SUMMARY

This article was developed in response to questions raised by families, clinicians, and educators in the course of evaluating selectively mute children in our clinic. Although ongoing studies of phenomenology and treatment were not yet completed, it was thought that there was an urgent need for practical information regarding assessment and treatment. Teachers and parents had asked how to treat these children and had questioned the appropriateness of special educational placements, yet no literature was available to assist them and many of the clinicians they turned to were unfamiliar with this disorder.

In our opinion, any child referred for selective mutism deserves a comprehensive assessment that addresses neurological, psychiatric, audiological, social, academic, and speech and language concerns. In the past, many of these children have not received complete assessments,

TABLE 2
School-Based Multidisciplinary Intervention

Goals	Specific Interventions
Decrease anxiety	• Child should not be forced to speak • Keep child in regular classroom unless special needs other than selective mutism supersede • Less emphasis on verbal performance (play nonverbal games) • Encourage relationships with peers • Cognitive-behavioral interventions: desensitization with relaxation • Coordinate school-based program with out-of-school interventions (individual and family psychotherapy, pharmacotherapy)
Increase nonverbal communciation	• Set up system for alternate means of communication (symbols, gestures, cards) • Small-group situations • Facilitate peer relationships
Increase social interaction	• Identify compatible peers for play in and out of school • Small-group situations • Activities that do not require verbal skills • Activities that encourage social skills
Increase verbal communication	• Structured behavioral modification plan: positive reinforcement for interactive and communicative behaviors, eventually reinforcement for speech • Speech and language therapy to develop linguistic skills • Pragmatically based language practice

either because clinicians believed they were untestable due to lack of verbal response or because clinicians deemed such assessments unnecessary. Our experience has been that it is not only possible to evaluate these children, but it is essential. Such evaluations can play an important role in identifying primary and comorbid issues and in developing appropriate treatment. Cognitive-behavioral, psychodynamic, pharmacological, and speech and language treatment approaches could all be integrated to decrease anxiety and to encourage speech and social interaction. Further systematic research will be required to evaluate the comparative effectiveness of these approaches.

REFERENCES

American Psychiatric Association (1994), *Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM-IV).* Washington, DC: American Psychiatric Association

Austad LS, Sinninger R, Stricken A (1980), Successful treatment of a case of elective mutism. *Behavior Therapist* 3:18–19

Bauermeister JJ, Jemail JA (1975), Modification of "elective mutism" in the classroom setting: a case study. *Behav Ther* 6:246–250

Bishop DVM (1994), Developmental disorders of speech and language. In: *Child and Adolescent Psychiatry: Modern Approaches,* Rutter M, Taylor E, Hersov L, eds. Oxford, England: Blackwell Scientific Publications, pp 546–568

Black B, Uhde TW (1992), Elective mutism as a variant of social phobia. *J Am Acad Child Adolesc Psychiatry* 31:1090–1094

Black B, Uhde TW (1994), Fluoxetine treatment of elective mutism: a double-blind, placebo-controlled study. *J Am Acad Child Adolesc Psychiatry* 33:1000–1006

Boon F (1994), The selective mutism controversy. *J Am Acad Child Adolesc Psychiatry* 33:283

Brown JB, Lloyd H (1975), A controlled study of children not speaking at school. *Assoc Workers Maladjusted Child* 3:49–63

Browne E, Wilson V, Laybourne PC (1963), Diagnosis and treatment of elective mutism in children. *J Am Acad Child Psychiatry* 2:605–617

Calhoun J, Koenig KP (1973), Classroom modification of elective mutism. *Behav Ther* 4:700–702

Cline T, Baldwin S (1994), *Selective Mutism.* London: Whurr Publishers

Crumley FE (1990), The masquerade of mutism. *J Am Acad Child Adolesc Psychiatry* 29:318–319

Cunningham CE, Cataldo MF, Mallion C et al. (1983), A review and controlled single case evaluation of behavioral approaches to the management of elective mutism. *Child Fam Behav Ther* 5:25–49

DiSimoni F (1978), *The Token Test for Children.* Boston: Teaching Resources Corporation

Dowrick PW, Hood M (1978), Transfer of talking behaviours across settings using faked films. In: *New Zealand Conference for Research in Applied Behavioural Analysis,* Glynn EL, McNaughton SS, eds. Auckland, NZ: University of Auckland Press

Dunn LM, Dunn LM (1981), *Peabody Picture Vocabulary Test-Revised.* Circle Pines, MN: American Guidance Services

Elson A, Pearson C, Jones CD, Schumacher E (1965), Follow up study of childhood elective mutism. *Arch Gen Psychiatry* 13:182–187

Friedman R, Karagan N (1973), Characteristics and management of elective mutism in children. *Psychol Sch* 10:249–254

Fundudis T, Kolvin I, Garside R (1979), *Speech Retarded and Deaf Children: Their Psychological Development.* London: Academic Press

Goll K (1979), Role structure and subculture in families of elective mute children. *Fam Process* 18:55–68

Golwyn DH, Weinstock RC (1990), Phenelzine treatment of elective mutism: a case report. *J Clin Psychiatry* 51:384–385

Hammil DD, Bryant BR (1986), *The Detroit Test of Learning Aptitude-Primary.* Austin, TX: Pro-ED

Hammil DD, Newcomer PL (1982), *The Test of Language Development.* Austin, TX: Pro-ED

Hayden TL (1980), Classification of elective mutism. *J Am Acad Child Psychiatry* 19:118–133

Heimberg RG, Barlow DH (1991), New developments in cognitive-behavioral therapy for social phobia. *J Clin Psychiatry* 5211(suppl):21–30
Herjanic B, Campbell W (1977), Differentiating psychiatrically disturbed children on the basis of a structured psychiatric interview. *J Abnorm Child Psychol* 5:127–135
Kolvin I, Fundudis T (1981), Elective mute children: psychological, development, and background factors. *J Child Psychol Psychiatry* 22:219–232
Kratochwill TR (1981), *Selective Mutism: Implications for Research and Treatment.* Hillsdale, NJ: Erlbaum
Kussmaul A (1877), *Die Störungen der Sprache.* Leipzig: FCW Vogel
Labbe EE, Williamson DA (1984), Behavioral treatment of elective mutism: a review of the literature. *Clin Psychol Rev* 4:273–294
Landgarten H (1975), Art therapy as a primary mode of treatment for an elective mute. *Am J Art Ther* 14:121–125
Leonard HL, Dow SP (1995), Selective mutism. In: *Anxiety Disorders in Children and Adolescents,* March J, ed. New York: Guilford Press, pp 235–250
Leonard HL, Swedo SE, Allen AJ, Rapoport JL (1994), Obsessive-compulsive disorder. In: *International Handbook of Phobic and Anxiety Disorders in Children and Adolescents,* Ollendick TH, King NJ, Yule W, eds. New York: Plenum Press, pp 207–221
Leonard HL, Topol DA (1993), Elective mutism. *Child Adolesc Psychiatr Clin North Am* 2:695–707
Lerea L, Ward B (1965), Speech avoidance among children with oral-communication defects. *J Psychol* 60:265–270
Lindblad-Goldberg M (1986), Elective mutism in families with young children. In: *Treating Young Children in Family Therapy,* Vol 18, Combrinck Graham L, ed. Rockville, MD: Aspen Publications, pp 31–42
MacDonald J (1978), *Environmental Language Inventory.* San Antonio, TX: Psychological Corporation
MacGregor R, Pullar A, Cundall D (1994), Silent at school: elective mutism and abuse. *Arch Dis Child* 70:540–541
McConnell N-, Blagden C (1986), *Interpersonal Language Skills Checklist.* East Moline, IL: LinguiSystems
Mecham MJ, Jones JD (1989), *The Utah Test of Language Development-3.* Austin, TX: Pro-ED
Meijer A (1979), Elective mutism in children. *Isr Ann Psychiatry Relat Discip* 17:93–100
Meyers SV (1984), Elective mutism in children: a family systems approach. *Am J Fam Ther* 22(4):39–45
Morris JV (1953), Cases of elective mutism. *Am J Ment Defic* 57:661–668
Orvaschel H, Puig-Antich J (1987), *Schedule for Affective Disorders and Schizophrenia for School-Age Children: Epidemiologic Version.* Medical College of Pennsylvania, Eastern Pennsylvania Psychiatric Institute
Parker EB, Olsen TF, Throckmorton MC (1960), Social case work with elementary school children who do not talk in school. *Soc Work* 5:64–70
Pigott HE, Gonzales FP (1987), Efficacy of video tape self-modeling in treating an electively mute child. *J Clin Child Psychol* 16:106–110
Pustrom E, Speers RW (1964), Elective mutism in children. *J Am Acad Child Psychiatry* 3:287–297
Raven JC (1976), *The Colored Progressive Matrices.* London: HK Lewis
Reed G (1963), Elective mutism in children: a reappraisal. *J Child Psychol Psychiatry* 4:99
Ripich D, Spinelli (1985), Classroom Communication Checklist. In: *School Discourse Strategies,* Ripich D, Spinelli, eds. San Diego: College Hill
Sanok RL, Ascione FR (1979), Behavioral interventions for elective mutism: an evaluative review. *Child Behav Ther* 1:49–67
Scott E (1977), A desensitisation programme for the treatment of mutism in a seven year old girl: a case report. *J Child Psychol Psychiatry* 18:263–270
Smayling JM (1959), Analysis of six cases of voluntary mutism. *J Speech Hear Disord* 24:55–58
Sonies BC, Scheib D, Moss S (1993), *National Institutes of Health Parent Checklist.* Bethesda, MD: National Institutes of Health
Strait R (1958), A child who was speechless in school and social life. *J Speech Hear Disord* 23:253–254
Tancer NK (1992), Elective mutism. In: *Advances in Clinical Child Psychology,* Vol 14, Lahey BB, Kazdin AE, eds. New York: Plenum Press, pp 265–288
Tramer M (1934), Elektiver Mutismus bei Kindern. *Z Kinderpsychiatr* 1:30–35
Voeller K (1986), Right-hemisphere deficit syndrome in children. *Am J Psychiatry* 143:1004–1009
Wechsler D (1974), *Manual for the Wechsler Intelligence Scale for Children-Revised.* New York: The Psychological Corporation
Weintraub S, Mesulam M (1983), Developmental learning disabilities and the right hemisphere. *Arch Neurol* 40:463–468
Wells K (1987), Scientific issues in the conduct of case studies: annotation. *J Child Psychol Psychiatry* 28:783–790
Wergeland H (1979), Elective mutism. *Acta Psychiatr Scand* 59:218–228
Wilkins R (1985), A comparison of elective mutism and emotional disorders in children. *Br J Psychiatry* 146:198–203
Woolfolk EC (1985), *The Test for Auditory Comprehension of Language-Revised.* Allen, TX: DLM Teaching Resources
Wright HH, Miller MD, Cook MA, Littman JR (1985), Early identification and intervention with children who refuse to speak. *J Am Acad Child Psychiatry* 24:739–746
Wright HL (1968), A clinical study of children who refuse to talk in school. *J Am Acad Child Psychiatry* 7:603–617
Youngerman J (1979), The syntax of silence: electively mute therapy. *Int Rev Psychoanal* 6:283–295
Zimmerman IL, Steiner VG, Pond RE (1991), *The Preschool Language Scale-3.* New York: The Psychological Corporation