

Practitioner Review: Psychosocial interventions for children with selective mutism: a critical evaluation of the literature from 1990–2005

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Background: There have been several reports of successful psychosocial interventions for children with selective mutism (SM), a disorder in which a child consistently fails to speak in one or more social settings (e.g., school) despite speaking normally in other settings (e.g., home). The present literature review was undertaken in order to provide an up-to-date summary and critique of the SM treatment literature published in the past fifteen years. **Methods:** PubMed, PsycINFO, and Web of Science databases were searched to identify SM treatment studies published in peer-reviewed journals between 1990 and 2005. **Results:** A total of 23 studies were included in the present review. Of these, ten used a behavioral/cognitive behavioral approach, one used a behavioral language training approach, one used a family systems approach, five used a psychodynamic approach, and six used multimodal approaches to SM treatment. **Conclusions:** Although much of this literature is limited by methodological weaknesses, the existing research provides support for the use of behavioral and cognitive-behavioral interventions. Multimodal treatments also appear promising, but the essential components of these interventions have yet to be established. An outline of a cognitive-behavioral treatment package for a typical SM child is provided and the review concludes with suggestions for future research. **Key-words:** Anxiety, behavior therapy, elective mutism, psychotherapy, selective mutism, therapy.

Selective mutism (SM) is a childhood disorder characterized by a persistent failure to speak in certain social situations. SM was first identified in 1877 by Adolf Kussmaul, who termed the condition ‘aphasia voluntaria.’ It was later named ‘elective mutism,’ reflecting the belief that children with the condition were actively choosing not to speak (Krysanski, 2003). This name was retained in the *International Classification of Diseases: ICD-10* (World Health Organization, 1992), but was changed to ‘selective mutism’ in the last two revisions of the *Diagnostic and Statistical Manual of Mental Disorders: DSM-IV-TR* (American Psychiatric Association, 2000), emphasizing the situational nature of SM and the conception that children are not willfully refusing to speak. Despite having been identified over a century ago, SM received little systematic attention in the psychological and psychiatric literature until the last two decades.

Diagnostic criteria

The DSM-IV-TR (American Psychiatric Association, 2000) and ICD-10 (World Health Organization, 1992) define the key feature of SM as a 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 (e.g., at home). In order to meet diagnostic criteria, the mutism must last at least one month and cannot be not better accounted for by a communication disorder or by a lack of knowledge of, or comfort with, the spoken language required in the social situation. Moreover, there must be evidence that the disturbance interferes with educational or occupational achievement or with social communication. According to DSM-IV-TR, associated features of SM can include ‘excessive shyness, fear of social embarrassment, social isolation and withdrawal, clinging, compulsive traits, negativism, temper tantrums, or controlling or oppositional behavior, particularly at home’ (American Psychiatric Association, 2000, p. 126). Because a certain number of normally developing children will show some degree of reticence in new social situations and some may even develop transient mutism during transitional periods, DSM-IV acknowledges that SM should not be diagnosed within the first month of school. The diagnosis of SM should also be ruled out if the child’s mutism occurs exclusively during the course of a pervasive developmental disorder or a psychotic disorder. Toppelberg, Tabors, Coggins, Lum, and Burger (2005) also recommend that bilingual children not be diagnosed with SM unless their mutism persists for at least six months and it is present in both the native and non-native language.

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Prevalence and course

To date, there are no epidemiological studies of childhood disorders that would allow estimates of SM prevalence based on large national or international samples. Results from recent community studies have found rates of approximately .75% (Bergman, Piacentini, & McCracken, 2002; Elizur & Perednik, 2003). The disorder appears to be slightly more common in girls, at least in clinically-referred samples (Cunningham, McHolm, Boyle, & Patel, 2004; Dummit, Klein, Tancer, & Asche, 1997; Kristensen, 2000). Age of onset is typically before the age of 5 (Black & Uhde, 1995; Dummit et al., 1997; Steinhausen & Juzi, 1996). Children with SM almost always show signs of the disorder prior to school entry (Schwartz, Freedy, & Sheridan, 2006), but the syndrome is likely to become more apparent during school-age as children face greater pressure to speak with their teachers and peers. School has been identified as the setting in which children first show signs of impairment due to mutism, even if the behavior was evident prior to school entry (Giddan, Ross, Sechler, & Becker, 1997; Standart & Le Couteur, 2003). There are little data regarding the long-term course of SM, but results from two studies of clinically-referred children indicate that a substantial number will experience a chronic course of mutism, while others will continue to experience marked discomfort in speaking situations even after remission of SM (Kolvin & Fundudis, 1981; Remschmidt et al., 2001). Results from a study of non-referred children with SM suggest that although some improvement may occur spontaneously throughout the school year, the majority of these children will remain impaired and symptomatic relative to unaffected peers (Bergman et al., 2002). For those who do improve with treatment, early intervention may be particularly important (Kolvin & Fundudis, 1981; Schwartz & Shipon-Blum, 2005).

Etiology

Several theories have been put forward to explain the development of SM, but little consensus exists regarding the cause or causes of the disorder. Early psychodynamic and family-systems views of SM emphasized exposure to trauma, unresolved intrapsychic conflicts, and controlling/oppositional behavior in the etiology of the disorder (Dow, Sonies, Scheib, Moss, & Leonard, 1995). However, over the past 10 years psychodynamic conceptualizations have decreased in influence as anxiety-related theories have gained popularity (Krysanski, 2003). Current conceptualizations view SM as closely related to shyness, social anxiety and behaviorally-inhibited temperament. For example, Black and Uhde (1992) suggested that social anxiety was a nearly universal characteristic of children with SM

and that SM may actually be a symptom of social phobia, rather than a distinct disorder. Case-control studies have also found high rates of social phobia and other anxiety disorders among SM children (Kristensen, 2000; Vecchio & Kearny, 2005). Other researchers have emphasized similarities between children with SM and those with behavioral inhibition, an enduring temperament in which children display fear, avoidance, or withdrawal from novel people, situations, or objects (Bergman et al., 2002). In support of this idea, results from a recent case-control study examining temperamental characteristics of children with SM indicated that, relative to children without the disorder, SM children were rated as more shy (showing more inhibition and awkwardness in social situations) and less social (showing a preference for being alone rather than with others) by both parents (Kristensen & Torgersen, 2002).

Although elevated rates of oppositional behavior (Yeganeh, Beidel, & Turner, 2006), communication deficits (Manassis et al., 2003) and developmental delays (Kristensen, 2000) have also been found in children with SM, the extent to which these are implicated in the etiology of the disorder remains unclear. Some researchers believe that SM may be best understood as a symptom of anxiety that reflects different underlying vulnerabilities. For example, Kristensen (2000) has suggested that communication deficits and neurodevelopmental delays may be the underlying cause for the anxiety expressed by many children with SM. Other researchers have noted higher rates of SM among bilingual immigrant children, suggesting that the stress of second language acquisition may also be a causal factor in the development of SM (Elizur & Perednik, 2003). Results from family history studies also indicate high rates of communication, depressive, and anxiety disorders in family members of children with SM. These findings, in addition to the high rates of social phobia among children with the disorder, have led many theorists to conclude that SM is best understood as a condition with a multifactorial etiology (Freeman, Garcia, Miller, Dow, & Leonard, 2004; Hultquist, 1995).

Psychosocial treatment of SM

The SM literature is still relatively small, making it difficult to determine what, if any, treatment children with SM typically receive in the community. Results from previous descriptive studies suggest that only 60% receive any mental health evaluation or treatment (Black & Uhde, 1995; Dummit et al., 1997; Kumpulainen Räsänen, Raaska, & Somppi, 1998). Individual psychotherapy is the most common psychosocial treatment modality employed, followed by family therapy (Kumpulainen et al., 1998; Steinhausen & Juzi, 1996). In the absence of specific

descriptions of the treatment approaches used in individual or family therapy settings it is difficult to determine how many of these children participated in psychodynamic art/play therapy, behavioral and cognitive-behavioral interventions, or some other approach. A more recent study concluded that the majority of SM children seen in primary care do not receive appropriate diagnosis or treatment referrals. The most common psychosocial treatments reported in this study were behavior modification and speech therapy (Schwartz, Freedy, & Sheridan, 2006). However, speech therapy is unlikely to be successful as stand-alone interventions for SM (Schwartz & Shipon-Blum, 1995).

Results from a recent meta-analysis of the SM treatment literature indicated that 1) some treatment was better than no treatment, 2) behaviorally-oriented treatment approaches were better than no treatment, and 3) two different behavioral models were not differentially effective in treating children with SM (Pionek Stone, Kratochwill, Sladeczek, & Serlin, 2002). Although the authors attempted to include studies using other treatment approaches, effect sizes could only be computed for a small number of the studies that were reviewed by the authors. These were all categorized as either behavioral or combined treatment approaches, making it impossible to draw conclusions regarding the efficacy of psychodynamic, family systems, or pharmacological treatment approaches. Still, the majority of narrative reviews of the SM treatment literature have also concluded that there is solid evidence supporting the use of behavioral interventions for SM (Anstendig, 1998; Labbe & Williamson, 1984; Leonard & Topol, 1993) and these are seen as the most widely respected treatment options. New cognitive behavioral interventions also appear promising (Mendlowitz, 2005; Schwartz & Shipon-Blum, 2005).

The present review

The most recent systematic narrative review of the SM treatment literature was conducted by Anstendig (1998), but this review only included studies published between 1980 and 1996. Therefore, the present literature review was undertaken in order to provide an up-to-date summary and critique of the SM treatment literature published in the past 15 years. Methods used to identify relevant citations were modeled after Torracco's (2005) guidelines for integrative literature reviews. First, PubMed, PsycINFO, and Web of Science databases were searched using the keywords 'selective mutism' and 'elective mutism.' Next, the titles and abstracts of the resulting citations were scanned to determine if each article described psychosocial interventions for children with SM. Finally, reference lists of the articles found through the database search were examined in order to identify additional relevant citations. This review

was limited to articles published in peer-reviewed journals between 1990 and 2005. Review articles and book chapters were consulted in order to provide relevant background information. Journal articles published in languages other than English and those describing children who did not meet criteria for SM were excluded. Of the studies included in this review, ten used a behavioral or cognitive-behavioral approach, one used a behavioral language training approach, five used a psychodynamic approach, one used a family systems approach, and six used multimodal approaches to SM treatment. Characteristics of the design, sample, and outcomes for these studies are presented in Table 1.

Behavioral and cognitive-behavioral interventions

Behavioral conceptualizations view SM as a learned behavior, which often develops as either an escape from anxiety or as way of gaining attention from others. In this model SM is seen as the product of a series of conditioning events and regardless of the original cause for the behavior, there is usually secondary gain for the child that maintains the mutism over time (Labbe & Williamson, 1984). Therefore behavioral treatments have employed techniques such as contingency management, shaping and stimulus fading, systematic desensitization, social skills training and modeling in order to increase verbalizations in settings where the child has previously remained mute. Contingency management interventions involve positive reinforcement of verbal behavior and have generally been combined with other interventions such as reinforcement of nonverbal communication like pointing and whispering (i.e., shaping) (Amari, Slifer, Gerson, Schenck, & Kane, 1999; Porjes, 1992) to increase verbalizations in problematic settings.

In a typical contingency management and shaping intervention, a reinforcement menu is first developed in collaboration with the child. Reinforcement is then provided for approximations of the target verbal behaviors (e.g., mouthing words, whispering, talking on the telephone) and later for normal speech. In single subject designs and case studies, positive outcomes have been reported for this type of intervention (Amari et al., 1999; Porjes, 1992), but follow-up data is lacking and the extent to which results are maintained after removal of the contingency management program is unclear. Although contingency management and shaping procedures have been successful in increasing verbalizations, additional interventions may be required to produce generalized speech.

A number of authors have reported the successful addition of stimulus fading procedures to shaping and contingency management in the treatment of SM (Masten, Stacks, Caldwell-Colbert, & Jackson, 1996; Watson & Kramer, 1992). Stimulus fading interventions build on the success of contingency manage-

Table 1 SM treatment studies published from 1990–2005

| Author (year) | N | Age, gender, race/ethnicity | Study design | Treatment approach | Duration | Techniques used | Outcome | Follow-up |
|-----------------------|---|---|---|--|--|---|--|---|
| Amari et al. (1999) | 1 | 7 years, female, ethnicity not reported | Single-subject experiment (multiple baseline across settings) | Behavioral | 20 days with 13-week follow-up in school setting | Shaping, contingency management | Increased verbalizations in physical therapy setting | Percentage of verbal behavior averaged 84% over 13 weeks when reinforcement for verbalizations was provided in the school setting |
| Blum et al. (1998) | 3 | 6 years, female, ethnicity not reported 7 years, female, ethnicity not reported 9 years, female, ethnicity not reported | Single-subject experiments | Behavioral | 7–9 days | Self-modeling added to ongoing positive reinforcement programs | Increased verbalizations in response to scripted questions by teacher, school psychologist or neighbor | At 1 month follow-up all were speaking to the target individual |
| Bonovitz (2003) | 1 | 12 years, male, ethnicity not reported | Case study | Psychodynamic | Not reported, more than 1 year | Psychoanalysis, parent-child sessions, use of imitation, affect sharing, guessing games | Child developed interest in activities and became more engaged/spontaneous with parents, used nonverbal communication in session with therapist | None reported |
| Fung et al. (2002) | 1 | 7 years, male, ethnicity not reported | Case study | Cognitive Behavioral | 14 weeks | Psychoeducation, cognitive restructuring, anxiety management, self-modeling, social skills training | Increased vocalization with therapist by session 10, initiation of speaking with teacher, pre-post improvement on anxiety, SM, and global measures of impairment | None reported |
| Giddan et al. (1997) | 1 | 9 years, female, ethnicity not reported | Case study | Multimodal (Behavioral, psychodynamic, speech-language) | 2 years | Stimulus fading, response initiation, shaping, response cost, adjunctive speech/language therapy | Increased vocalization in therapy and school settings | 2 years after beginning intervention child was speaking normally in school setting |
| Jackson et al. (2005) | 1 | 6 years, male, ethnicity not reported | Single-subject experiment | Multimodal (Behavioral, cognitive, systems, psychodynamic) | 25 sessions | Systematic desensitization, shaping, relaxation training, parent journaling, play therapy | Child began speaking in therapy and school settings by session 24 | 1 year after intervention child was interacting verbally with peers and teachers in school setting |
| Kehle et al. (1990) | 1 | 6 years, male, Caucasian | Single-subject experiment | Behavioral | 5 sessions | Self-modeling, positive reinforcement | Child began speaking to peers and school personnel after 5 sessions | At 7 month follow-up child continued to speak freely with school personnel and peers |
| Kehle et al. (1998) | 3 | 9 years, female, Caucasian 9 years, female, Caucasian 5 years, male, Caucasian | Single-subject experiments | Behavioral | 5 weeks 9 weeks 4 weeks | Self-modeling, positive reinforcement, stimulus fading – fluoxetine added in one case | Children began speaking at school in a manner consistent with peers | At 7–9 month follow-ups all children continued to speak in a manner consistent with peers |

Table 1 Continued

| Author (year) | N | Age, gender, race/ethnicity | Study design | Treatment approach | Duration | Techniques used | Outcome | Follow-up |
|------------------------------|----|--|---------------------------|--|------------------------------------|--|---|--|
| Krohn et al. (1992) | 20 | Mean = 6.7 years, 12 females, 8 males, Caucasian | Record review | Multimodal (Behavioral, psychodynamic, family/school involvement) | Mean = 11 months (SD = 7.1) | Response initiation, response cost, shaping, play therapy, adjunctive marital/family therapy | Average onset of speech was second session, 17 showed normal speech and functioning in school and home, 1 functioned normally but continued to speak softly, 2 showed reluctant speech with strangers or family members | None reported |
| Masten et al. (1996) | 1 | 8 years, male, Hispanic | Case study | Behavioral | 3 years, 66 sessions | Shaping, positive reinforcement, stimulus fading, assertiveness skills training group | Increased vocalizations with therapist, in school setting a normal voice when asked but did not initiate spontaneous speech | None reported |
| Moldan (2005) | 1 | 6 years, female, ethnicity not reported | Case study | Multimodal (behavioral, cognitive-behavioral, psychodynamic), concurrent pharmacological treatment | Not reported | Stimulus fading, socialization group, play therapy, parent training | Increased vocalizations in presence of therapist, spoke spontaneously in individual and group therapy sessions and to psychiatric speech in community settings was inconsistent | At 5 month follow-up child spoke spontaneously in individual and group therapy sessions and to psychiatric speech in community settings was inconsistent |
| Pecukonis & Pecukonis (1991) | 1 | 7 years, male, African-American | Single subject experiment | Behavioral language training | 33 sessions | Shaping, positive reinforcement/contingency management | Increase in nonverbal attending, verbal imitation, and functional language following training sessions, increase in spontaneous verbalizations in home and school settings | None reported |
| Porjes (1992) | 2 | 6 years, female, ethnicity not reported | Case study | Behavioral | Not reported | Ecological analysis, contingency management, shaping | Increased verbalizations in school setting for both children, increased spontaneous speech for one child | None reported |
| Powell & Dalley (1995) | 1 | 6 years, female, ethnicity not reported | Case study | Multimodal (behavioral, psychodynamic) | 6 months, 34 sessions | Contingency management, self-modeling, social skills training, stimulus fading, play therapy, family involvement | Child began speaking spontaneously in school in a manner consistent with her peers | At 6-month follow-up child showed no behavioral difficulties and continued to speak in a manner consistent with peers |
| Rossouw & Lubbe (1994) | 1 | 6 years, male, Caucasian | Case study | Psychodynamic | Not reported, at least 52 sessions | Play therapy | After 16 sessions, child spoke with a friend on the telephone, after 37 sessions child began speaking with therapist in session | None reported |
| Russell et al. (1998) | 3 | Age, gender, and ethnicity not reported | Single-subject experiment | Multimodal (Behavioral, speech-language), two children were administered fluoxetine after 4 weeks | 12 weeks | Contingency management, shaping, speech therapy | Statistically significant increase in teacher-ratings of speech behavior in home, classroom, play, and public situations | None reported |

Table 1 Continued

| Author (year) | N | Age, gender, race/ethnicity | Study design | Treatment approach | Duration | Techniques used | Outcome | Follow-up |
|--------------------------|----|--|---------------------------|---|--------------------------------|--|---|--|
| Rye & Ullman (1999) | 1 | 13 years, male, ethnicity not reported | Case study | Behavioral | 18 months, 63 sessions | Systematic desensitization, self-modeling, social skills training | Decreased speech-related anxiety, increased frequency of verbalizations and individuals spoken to, improved school attendance and participation in extracurricular activities | At one-year follow-up child's frequency of verbalizations was indistinguishable from peers |
| Shreeve (1991) | 1 | 4 years, female, ethnicity not reported | Case study | Psychodynamic | 1 year | Play therapy, art therapy, parent sessions, concurrent marital therapy | Child began speaking in school and no longer showed inhibited speech during therapy sessions | None reported |
| Stuckin et al. (1991) | 25 | 4–8 years, 20 female, 5 male, ethnicity not reported | Record review | Behavioral, standard school-based remedial programs | Not reported | Stimulus fading, behavioral play therapy, shaping | Not reported | At 2–10-year follow-up children who received behavioral treatment were more likely to have improved than those who received standard remedial programs |
| Tatem & Delcampo (1995) | 1 | 3 years, female, ethnicity not reported | Case study | Family systems | 3 months, 10 sessions | Structural family therapy, play training | Child began speaking with relatives and friends | At 9-month follow-up child maintained level of speech and began speaking with other new individuals |
| Valher & Nemiroff (1995) | 1 | 6 years, female, Hispanic | Case study | Psychodynamic | Not reported, more than 1 year | Play therapy, parent sessions | Child began speaking to therapist during sessions and later to friends at school (but not in the classroom setting) | None reported |
| Watson & Kramer (1992) | 1 | 8 years, male, Caucasian | Single subject experiment | Behavioral | 26 weeks | Shaping, contingency management, stimulus fading | Increased verbalizations in home settings, increased number of people spoken to in school setting | At 4–6-month follow-up child maintained increased verbalizations at home and generalized to other settings, increased verbalizations in school were not maintained |
| Yanof (1996) | 1 | 4 years, male, ethnicity not reported | Case study | Psychodynamic | 3.5 years | Play therapy, psychoanalysis | Child first spoke in therapy and school settings after three months of analysis (4 sessions each week) | None reported |

ment and shaping by gradually increasing the number of people and places in which speech is rewarded. For example, the child may first be rewarded for speaking to a classmate to whom s/he already speaks outside of school. Gradually, other students are introduced into the group until the child is able to speak in the presence of a large group of peers. Stimulus fading can also be used in problematic situations that occur outside of school (e.g., talking to grandparents, ordering in fast food restaurants). As shown in Table 1, interventions involving stimulus fading have been successful in increasing both the amount of speech and the number of people spoken to in a variety of settings (Masten et al., 1996; Watson & Kramer, 1992).

Another type of behavioral intervention that appears promising for children with persistent SM is systematic desensitization (Rye & Ullman, 1999). Systematic desensitization traditionally involves the use of relaxation skills along with gradual exposure to successively more anxiety-provoking situations. In this type of intervention a hierarchy of feared speaking events is constructed and therapy consists of a series of imaginal and in vivo exposures to feared situations. Systematic desensitization may be particularly helpful when school-based contingency management and remedial programs are unsuccessful and there are significant secondary gains for the child (Rye & Ullman, 1999). In cases where anxiety is related to social interactions with peers, social skills training may also be used to reduce anxiety and facilitate speech with peers. Systematic desensitization has been successfully used to reduce speech-related anxiety and to increase the frequency of speech with teachers and peers. This technique appears to work well with older children, but graduated in vivo exposure may be the most appropriate approach for younger children who often have difficulty with progressive muscle relaxation and imagery exercises (Compton et al., 2004).

In the studies conducted to date, self-modeling has also been described as a particularly successful and cost-effective intervention for SM children (Blum et al., 1998; Kehle, Owen, & Cressy, 1990). This technique involves making video and/or audiotapes that have been edited to depict the child speaking in settings in which he or she has previously remained mute. The tapes are played repeatedly throughout the intervention, with the expectation that the child will become accustomed to hearing him- or herself speaking in these settings and will begin to believe in his or her ability to do so. Self-modeling has also been combined with stimulus fading and reinforcement techniques (Blum et al., 1998; Kehle, Madaus, Baratta, & Bray, 1998) and low doses of fluoxetine (Kehle et al., 1998). Positive results (i.e., speech consistent with that of same-age peers) have been reported immediately following the intervention and at seven- to nine-month follow-up (Kehle et al., 1990, 1998). A notable strength of the literature on

self-modeling interventions has been the use of single subject experimental methods, rather than descriptive case studies. However, Blum et al. (1998) cautioned that several SM children in their study were unwilling to record an audiotape. In some cases listening to edited audiotapes actually increases the child's anxiety about speaking, making this intervention unsuitable for a certain segment of the SM population (Powell & Dalley, 1995). Since self-modeling has often been combined with other behavioral techniques like positive reinforcement and stimulus fading, the extent to which it can be considered a stand-alone intervention remains unknown.

The majority of SM treatment studies are limited in the lack of comparison groups, but there has been one small group study comparing different SM treatments. Sluckin, Foreman, and Herbert (1991) conducted a follow-up study of 25 children who were referred by their schools for treatment of SM. Eleven of these children participated in behavioral therapy that used a combination of shaping and stimulus fading procedures, while the remaining 14 children participated in school-based remedial programs led by special needs teachers. Results indicated that those in the behavioral intervention improved significantly more than those in the remedial programs. Interestingly, a history of family psychopathology significantly reduced the likelihood of improvement at follow-up in both groups. Results from this study provide preliminary evidence for the superiority of behavioral interventions in comparison to what might be considered a type of 'treatment as usual' for children with SM. However, the sample was made up of children identified through retrospective record reviews, treatment procedures were not standardized, and there was no random assignment to treatment groups.

Researchers at the University of California in Los Angeles have improved on previous studies of behavioral interventions by employing manualized intervention procedures, using random assignment to groups, and adding a waitlist control group. This intervention consists of individual behavior therapy sessions with the child. Early in treatment a graded hierarchy of speaking-related situations is developed in collaboration with the child to order to guide clinic, school, and community-based exposure exercises. Exposures are then conducted using systematic desensitization, shaping, self-modeling, and reinforcement. Treatment occurs over 20 sessions and parents routinely attend those that address the review and assignment of exposure activities. The intervention is primarily behavioral in nature due to the developmental level of the children but, when possible, some cognitive techniques are also included (i.e., identifying anxious cognitions, cognitive restructuring). This study is currently under way and results are not yet available (R. L. Bergman, personal communication, May 8, 2006). Following completion of this study, additional replications and

dismantling studies that compare various components of behavioral interventions will also be useful to elucidate which components represent the 'active ingredients' in behavioral treatment of SM.

In addition to purely behavioral treatments, interventions employing both cognitive and behavioral techniques have shown some promise with SM children (Fung, Manassis, Kenny, & Fiskensbaum, 2002). This type of intervention is based on anxiety-management approaches (e.g., relaxation training, cognitive restructuring, exposure) that have been effective in treating social anxiety and related disorders (Mendlowitz et al., 1999). The treatment package includes parent psychoeducation, cognitive techniques (e.g., recognizing bodily symptoms of anxious distress, identifying and challenging maladaptive beliefs, developing a coping plan to deal with distress), and behavioral exercises (e.g., relaxation training, exposure to feared situations). Comparison of pre-treatment and post-treatment ratings by child, parent, and teacher indicated improvements in anxiety and SM symptom severity across settings (Fung et al., 2002). Although the lack of treatment or control groups limits the extent to which improvement can be attributed to the intervention, the authors used assessment measures with established psychometric properties and multiple informants to evaluate treatment response. Since this treatment focuses on anxiety management, additional studies are needed to determine the extent to which children who show SM in the absence of significant social anxiety can also benefit from cognitive behavioral therapy. It is important to note that cognitive techniques are best suited to older children and may have limited utility due to the young age of many children with SM. Further research is needed to determine the efficacy of this type of intervention with children of varied ages, genders, and ethnic backgrounds. Still, this study is promising and the authors are currently recruiting a larger sample of SM children for a controlled study of the intervention in Singapore (D. Fung, pers. comm., May 15, 2006).

Behavioral language training interventions

As shown in Table 1, there has been one intervention specifically designed to help intellectually delayed children with SM develop language skills (Pecukonis & Pecukonis, 1991). This treatment program focused on training the child in nonverbal attending, verbal imitation, and functional conversation, and generalized functional verbal language skills. Positive reinforcement with a fixed ratio schedule was used to train the child to first make eye contact with the trainer. Next, training focused on verbal imitation and functional conversational skills. In the final phase of the intervention reinforcement for appropriate verbal responses was provided on a variable ratio schedule in home and school settings. At the close of treatment the child had made significant

improvements in each of the target behaviors. Parents and teachers also noted an increase in spontaneous speech outside of training sessions, but the average number of spontaneous interactions remained low across settings. Although the intervention was successful at increasing the frequency of verbal interactions, these gains may be seen as modest compared to results of some other interventions. The extent to which this type of training program would be useful for SM children who are not developmentally or intellectually delayed is unclear. Additional single subject experiments and group studies are needed to determine the relative success of behavioral language training in comparison to other SM treatment approaches.

Family therapy interventions

Family therapy approaches have also been used to treat children with SM, although family therapy has not been used as frequently as individual therapy (Steinhausen & Juzi, 1996). From a family-systems perspective, the family is viewed as an interactive unit in which each individual seeks to get his or her needs met from the other family members. In this framework, the child's mutism is seen as serving a certain function within the family. Therefore family-systems therapy for SM focuses on identifying faulty family relationships and patterns of communication that have caused and/or maintained the child's mutism. Family therapy sessions typically include the child along with parents, siblings, and other relevant family members. The therapist uses various techniques (e.g., exploring patterns of communication, providing education and support) in order to promote more positive and constructive family functioning, with the idea that this will remove the conditions maintaining the child's mutism.

Tatem and DelCampo (1995) used a structural family therapy approach in which the child's mutism was conceptualized as due to the child's strong and mutually dependent relationship with her mother. They described the family structure as out of balance, with an over-controlling mother, rigid boundaries, and low levels of parental cohesion and emotional closeness. Individual play therapy was used to encourage the child to be more independent, and the mother was instructed to set firm limits on specific behaviors while taking a less directive approach in routine interactions with her daughter. Extended family members and friends were told not to place pressure on the child to speak and not to praise her for vocalizations. After three months of treatment the child had begun speaking with her paternal grandparents, a housekeeper, and several other relatives and friends. In the final session the authors noted that she appeared 'content that her feelings could be expressed and she was acceptable as she was' (p. 191). Table 1 presents additional details regarding this intervention.

Like many of the case studies included in this review, this is an uncontrolled study and is limited by lack of systematic assessment of outcome variables. However, the results may prove useful in suggesting areas for future research. The authors conceptualized this case from a family-systems perspective, but the parent training techniques used bear a striking similarity to those found in parent management interventions that have been highly successful in treating child behavior problems (Hood & Eyberg, 2003) and separation anxiety disorder (Choate, Pincus, Eyeberg, & Barlow, 2005). Thus far, cognitive behavioral treatment for SM has focused on anxiety management techniques, but parent management training may also prove to be an important tool, particularly for children who present with behavior problems in addition to SM.

Psychodynamic interventions

A number of psychodynamic case studies have also described treatment of children with SM (see Table 1). These conceptualizations view SM as an expression of unresolved intrapsychic conflicts such as delayed grief (Valner & Nemiroff, 1995), parental hostility and stranger anxiety (Shreeve, 1991), impaired object relations (Bonovitz, 2003; Rossouw & Lubbe, 1994), and castration anxiety (Yanof, 1996). Therefore, treatment involves techniques aimed at understanding the meaning of the child's mutism and its origins in the unconscious. Classical psychoanalysis has been used with older SM children (Bonovitz, 2003), but art and play therapy are the primary techniques employed with younger children. Play therapy typically involves the unstructured use of games and toys to help the child identify and express his or her feelings. Similarly, art therapy involves the use a wide variety of art materials (e.g., drawings, paints, clay) to create visual representations of the child's thoughts and feelings. In psychodynamic treatment the therapist does not target the symptoms of SM directly, instead calling attention to how the child uses play materials in order to explain the symbolic meaning of the child's mutism. The goal of psychodynamic interventions is to allow the child to express his or her inner conflicts, with the expectation that he or she will no longer need to remain silent. Although psychodynamic case studies provide a rich description of the child and the process of therapy, outcomes are often unclear due to lack of systematic assessment. None of these studies included experimental controls, making it is impossible to rule out additional causes for the child's improvement (e.g., history, maturation).

Multimodal interventions

Several authors have also used multidisciplinary or 'multimodal' approaches to treat SM. These inter-

ventions combine methods from psychodynamic, cognitive, behavioral, speech/language, and family therapy traditions in an effort to ameliorate the symptoms of SM. Moldan (2005) developed a multimodal treatment that includes stimulus fading, play therapy, parent training, and a socialization group based on her conceptualization that SM results from a child's 'attempt to self-regulate internal anxiety and other emotional states' (p. 292). Powell and Dalley (1995) used a variety of behavioral techniques (contingency management, shaping, self-modeling, stimulus fading) in addition to ongoing play therapy sessions with the school psychologist to treat a six-year-old girl with persistent SM. After six months of treatment and at six-month follow-up the child was speaking in school in a manner consistent with her peers. Jackson, Allen, Boothe, Nava, and Coates (2005) used a combination of systematic desensitization, shaping, relaxation training, parent journaling, and play therapy to treat a six-year-old boy with SM. After 25 sessions, the child was speaking normally in the classroom.

Another multimodal approach combines family involvement and empathic dynamic psychotherapy with response initiation procedures based on escape-avoidance principles (Krohn, Weckstein, & Wright, 1992). Following several session of rapport-building with the child, a day is chosen for a lengthy session in which the child is not allowed to leave without speaking to his or her therapist. Parents are then instructed to require their child to begin speaking in public and if they are unable to do so additional family and/or marital therapy is provided. Response initiation procedures are then transferred to the school setting and behavioral techniques like shaping and stimulus fading are used to increase volume or generalize speech to other individuals. Play and art therapy techniques are also included to address other emotional problems expressed by the SM child. After analyzing case records for 20 SM children treated using this approach, Krohn and colleagues concluded that 85% of the sample had excellent outcomes, with normal speech evident in school and home settings. The same response initiation procedure has also been used in combination with behavioral interventions (shaping, positive reinforcement, response cost) and speech therapy (Giddan et al., 1997). The response initiation procedures used in these interventions were developed based on a conceptualization of SM as an oppositional behavior that is chosen by children 'who see silence used as a weapon in the family' (Krohn et al., 1992, p. 717) and may be contraindicated for children whose SM is more strongly related to social anxiety. The ethics of this practice may also be questionable.

In addition to studies that combine behavioral, psychodynamic, and family therapy techniques, there have been a few published reports of multidisciplinary interventions for SM involving speech

therapists and other school personnel (Giddan et al., 1997; Russell, Raj, & John, 1998). However, the extent to which most interventions are targeted towards a given child's symptom picture and associated deficits is unclear. The majority of behavioral interventions have not included adjunctive treatments specifically targeting communication deficits, developmental delays, or second-language acquisition. Multidisciplinary interventions of this sort are likely to be quite promising for SM children who experience these difficulties. Although there is very little research in this area, preliminary evidence suggests that interventions that focus on language skills in addition to cognitive-behavioral and anxiety management techniques are promising for children who have SM and comorbid communication disorders (Mendlowitz, 2005).

No published studies have examined the efficacy of multidisciplinary interventions using bilingual language specialists, but Toppelberg and colleagues (2005) provide some useful suggestions for the inclusion of bilingual speech/language pathologists in the assessment and treatment of SM. They state that these specialists are in a strong position to identify features of the school environment that can lead to the development of SM. These may include 'lack of class support for children learning a second language; negative, prejudiced, or even chauvinistic views of the child's assets (such as his or her home language or cultural traditions); the high linguistic and cognitive demand resulting from sudden immersion in a second language; and feeble parent-school relationships' (p. 594). Once these issues have been identified, the bilingual language specialist is better able to develop interventions and accommodations targeting the child's specific vulnerabilities within the school environment. It is likely that interventions taking into account specific stressors related to second-language acquisition for bilingual children with SM will prove more effective than current approaches that do not acknowledge these important environmental and socio-cultural factors.

Summary and conclusions

Taken together, the studies included in this review provide additional support for the use of behavioral and cognitive-behavioral interventions with children suffering from SM. Behavioral interventions with various combinations of contingency management, shaping, stimulus fading, social skills training, and self-modeling have all been effective in this population, but it should be noted that certain techniques may be contraindicated depending on the child's clinical presentation (e.g., self-modeling may not work well with some anxious youngsters). Cognitive behavioral approaches that include cognitive processing, relaxation training, and systematic desen-

sitization may also be effective in treating children with SM, but more research is needed in this area. Shaping and stimulus fading techniques appear to work well in school settings, while systematic desensitization may be used in individual therapy sessions to help the child learn to manage his or her anxiety in feared social situations. Multimodal interventions also appear to be effective, but the essential components of these interventions have yet to be established. Randomized controlled treatment studies and dismantling studies are needed in order to further evaluate this issue.

A potentially effective treatment approach for a typical SM child who experiences significant social anxiety and is mute at school would include individual psychotherapy focusing on communication skills and anxiety management, in addition to a behavioral program implemented concurrently in the school setting to shape appropriate verbal communication. An effective behavioral intervention should involve a slow, systematic program that rewards successive approximations of the target behaviors (e.g., normal social interaction and communication in all settings). Attempts at improved communication in school and therapy settings should be initially reinforced, even if these are nonverbal (e.g., making appropriate eye contact, nonverbal participation in group activities). As the child learns skills to manage his or her anxiety (through relaxation training, cognitive restructuring, and exposure exercises), he or she should be reinforced for more complex interactions and verbal behaviors. A hierarchy of feared speaking situations may also be developed for the child during individual therapy sessions. The therapist helps the child practice speaking in these situations until the child feels comfortable at each step of the hierarchy. When comfort is reached in individual sessions, the hierarchy is transferred to the school setting. If needed, stimulus fading techniques can also be used to help the child to initially become comfortable with the therapist. These same techniques can later be used in the school setting to help generalize speech to different individuals and areas of the school. This may involve inviting peers to play-dates in a location the child is comfortable speaking and later moving these play dates to the school grounds, and finally inside the child's classroom.

Future research directions

Although interest in SM has grown considerably over the past 15 years, definitive treatment outcome studies have yet to be conducted. The majority of the literature in this area consists of retrospective record reviews, uncontrolled case studies, and a small number of single-participant experiments of varied methodological quality. To date there has been only one small non-controlled treatment study (Krohn,

Weckstein, & Wright, 1992) and one small group study comparing two different SM treatments (Sluckin, Foreman, & Herbert, 1991). The age range of the children studied is quite narrow, with only two studies describing interventions with older children (Bonovitz, 2003; Rye & Ullman, 1999). There is also a great deal of inconsistency in the duration of treatment (five sessions to more than three years) and overall the follow-up time is short (usually less than one year post-treatment). Lack of adequate descriptions of diagnostic procedures, number and content of treatment sessions, and outcome measures adds to the difficulty in evaluating the efficacy of SM interventions. Furthermore, the current literature may not be an accurate reflection of SM treatments since unsuccessful trials are unlikely to be published. There is a need for randomized controlled trials of psychosocial treatments for SM, but large-scale investigations of this type have been difficult to carry out due in part to under-detection, low prevalence rates of the disorder in the general population, and beliefs that children will naturally grow out of the behavior.

These shortcomings are understandable, as recruitment of children with a relatively rare psychiatric disorder is a formidable challenge for researchers. In order to conduct larger treatment outcome studies, researchers will be required to forge strong relationships with school psychologists, speech-language pathologists, primary care doctors, SM advocacy groups, and other community organizations. However, even within these limitations it is possible to conduct high-quality single-subject experiments that can be used to evaluate the effectiveness of SM treatments. Publication of methodologically sound single-subject experiments that replicate results of previous interventions will allow for additional meta-analytic evaluation of SM interventions. In addition, randomized controlled trials are sorely needed to determine the relative efficacy of various types of SM treatment. Communication deficits, developmental delays, and bilingual language acquisition appear to play a role in at least some cases of SM, but these variables have not been directly addressed in most treatment outcome studies. The extent to which any of the current SM interventions are successful across a variety of ages and with immigrants or children who have comorbid developmental delays and/or communication deficits is another important area for future research. These studies are beginning to be conducted, and in the near future we are likely to see an increase in our knowledge regarding the etiology, course, and treatment of SM.

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References

- Amari, A., Slifer, K.J., Gerson, A.C., Schenck, E., & Kane, A. (1999). Treating selective mutism in a paediatric rehabilitation patient by altering environmental reinforcement contingencies. *Pediatric Rehabilitation, 3*, 59–64.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th edn, text rev.). Washington, DC: American Psychiatric Association.
- Anstendig, K. (1998). Selective mutism: A review of the treatment literature by modality from 1980–1996. *Psychotherapy: Theory, Research, Practice, Training, 35*, 381–391.
- Bergman, R.L., Piacentini, J., & McCracken, J.T. (2002). Prevalence and description of selective mutism in a school-based sample. *Journal of the American Academy of Child and Adolescent Psychiatry, 41*, 938–946.
- Black, B., & Uhde, T.W. (1995). Psychiatric characteristics of children with selective mutism: A pilot study. *Journal of the American Academy of Child and Adolescent Psychiatry, 34*, 847–856.
- Black, B., & Uhde, T.W. (1992). Elective mutism as a variant of social phobia. *Journal of the American Academy of Child and Adolescent Psychiatry, 31*, 1090–1094.
- Blum, N.J., Kell, R.S., Starr, H.L., Lender, W.L., Bradley-Klug, K.L., Osbourne, M.L., et al. (1998). Case study: Audio feedforward treatment of selective mutism. *Journal of the American Academy of Child and Adolescent Psychiatry, 37*, 40–43.
- Bonovitz, C. (2003). Treating children who do not play or talk: Finding a pathway to intersubjective relatedness. *Psychoanalytic Psychology, 20*, 315–328.
- Choate, M.L., Pincus, D.B., Eyeberg, S.M., & Barlow, D.H. (2005). Parent-child interaction therapy for treatment of separation anxiety disorder in young children: A pilot study. *Cognitive and Behavioral Practice, 12*, 126–135.
- Compton, S.N., March, J.S., Brent, D., Albano, A.M., Weersing, R., & Curry, J. (2004). Cognitive-behavioral psychotherapy for anxiety and depressive disorders in children and adolescents: An evidence-based medicine review. *Journal of the American Academy of Child and Adolescent Psychiatry, 43*, 930–959.
- Cunningham, C.E., McHolm, A., Boyle, M.H., & Patel, S. (2004). Behavioral and emotional adjustment, family functioning, academic performance, and social relationships in children with selective mutism. *Journal of Child Psychology and Psychiatry, 45*, 1363–1372.
- Dow, S.P., Sonies, B.C., Scheib, D., Moss, S.E., & Leonard, H.L. (1995). Practical guidelines for the assessment and treatment of selective mutism. *Journal of the American Academy of Child and Adolescent Psychiatry, 34*, 836–846.
- Dummit, E.S., Klein, R.G., Tancer, N.K., & Asche, B. (1997). Systematic assessment of 50 children with selective mutism. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*, 653–660.
- Elizur, Y., & Perednik, R. (2003). Prevalence and description of selective mutism in immigrant and native families: A controlled study. *Journal of the*

- American Academy of Child and Adolescent Psychiatry*, 42, 1451–1459.
- Freeman, J.B., Garcia, A.M., Miller, L.M., Dow, S.P., & Leonard, H.L. (2004). Selective mutism. In T.L. Morris & J.S. March (Eds.), *Anxiety disorders in children and adolescents* (2nd edn, pp. 280–301). New York: Guilford Press.
- Fung, D.S., Manassis, K., Kenny, A., & Fiskensbaum, L. (2002). Web-based CBT for selective mutism. *Journal of the American Academy of Child and Adolescent Psychiatry*, 41, 112–113.
- Giddan, J.L., Ross, G.J., Sechler, L.L., & Becker, B.R. (1997). Selective mutism in elementary school: Multi-disciplinary interventions. *Language, Speech, and Hearing Services in Schools*, 28, 127–133.
- Hood, K.K., & Eyberg, S.M. (2003). Outcomes of parent-child interaction therapy: Mothers' reports of maintenance three to six years after treatment. *Journal of Clinical Child and Adolescent Psychology*, 32, 419–429.
- Hultquist, A.M. (1995). Selective mutism: Causes and interventions. *Journal of Emotional and Behavioral Disorders*, 3, 100–107.
- Jackson, M.F., Allen, R.S., Boothe, A.B., Nava, M.L., & Coates, A. (2005). Innovative analyses and interventions in the treatment of selective mutism. *Clinical Case Studies*, 4, 81–112.
- Kehle, T.J., Madaus, M.R., Baratta, V.S., & Bray, M.A. (1998). Augmented self-modeling as a treatment for children with selective mutism. *Journal of School Psychology*, 36, 247–260.
- Kehle, T.J., Owen, S.V., & Cressy, E.T. (1990). The use of self-modeling as an intervention in school psychology: A case study of an elective mute. *School Psychology Review*, 19, 115–121.
- Kolvin, I., & Fundudis, T. (1981). Elective mute children: Psychological development and background factors. *Journal of Child Psychology and Psychiatry*, 22, 219–232.
- Kristensen, H. (2000). Selective mutism and comorbidity with developmental disorder/delay, anxiety disorder, and elimination disorder. *Journal of the American Academy of Child and Adolescent Psychiatry*, 39, 249–256.
- Kristensen, H., & Torgersen, S. (2002). A case-control study of EAS child and parental temperaments in selectively mute children with and without a comorbid communication disorder. *Nordic Journal of Psychiatry*, 56, 347–353.
- Krohn, D.D., Weckstein, S.M., & Wright, H.L. (1992). A study of the effectiveness of a specific treatment for elective mutism. *Journal of the American Academy of Child and Adolescent Psychiatry*, 31, 711–718.
- Krysanski, V.L. (2003). A brief review of the selective mutism literature. *Journal of Psychology: Interdisciplinary and Applied*, 137, 29–40.
- Kumpulainen, K., Räsänen, E., Raaska, H., & Somppi, V. (1998). Selective mutism among second-graders in elementary school. *European Child and Adolescent Psychiatry*, 7, 24–29.
- Labbe, E.E., & Williamson, D.A. (1984). Behavioral treatment of elective mutism: A review of the literature. *Clinical Psychology Review*, 4, 273–292.
- Leonard, H.L., & Topol, D.A. (1993). Elective mutism. *Child and Adolescent Psychiatric Clinics of North America*, 2, 695–707.
- Manassis, K., Fung, D., Tannock, R., Sloman, L., Fiksenbaum, L., & McInnes, A. (2003). Characterizing selective mutism: Is it more than social anxiety? *Depression and Anxiety*, 18, 153–161.
- Masten, W.G., Stacks, J.R., Caldwell-Colbert, A.T., & Jackson, J.S. (1996). Behavioral treatment of a selectively mute Mexican-American boy. *Psychology in the Schools*, 33, 56–60.
- Mendlowitz, S. (2005). *When cognitive behavioral therapy isn't enough*. Paper presented at the 25th annual conference of the Anxiety Disorders Association of America, Seattle, WA.
- Mendlowitz, S.L., Manassis, K., Bradley, S., Scapillato, D., Mieztis, S., & Shaw, B.F. (1999). Cognitive-behavioral group treatments in childhood anxiety disorders: The role of parental involvement. *Journal of the American Academy of Child and Adolescent Psychiatry*, 8, 1223–1229.
- Moldan, M.B. (2005). Selective mutism and self-regulation. *Clinical Social Work Journal*, 33, 291–306.
- Pecukonis, E.V., & Pecukonis, M.T. (1991). An adapted language training strategy in the treatment of an electively mute male child. *Journal of Behavior Therapy and Experimental Psychiatry*, 22, 9–21.
- Pionek Stone, B., Kratochwill, T.R., Sladeczek, I., & Serlin, R.C. (2002). Treatment of selective mutism: A best-evidence synthesis. *School Psychology Quarterly*, 17, 168–190.
- Porjes, M.D. (1992). Intervention with the selectively mute child. *Psychology in the Schools*, 29, 367–376.
- Powell, S., & Dalley, M. (1995). When to intervene in selective mutism: The multimodal treatment of a case of persistent selective mutism. *Psychology in the Schools*, 32, 114–123.
- Remschmidt, H., Poller, M., Herpertz-Dahlmann, B., Hennigause, K., & Gutenbunner, C. (2001). A follow-up study of 45 patients with elective mutism. *European Archives of Psychiatry and Clinical Neuroscience*, 251, 284–296.
- Rossouw, T., & Lubbe, T. (1994). Psychotherapy of a young boy with elective mutism. *Psycho-analytic Psychotherapy in South Africa*, 2, 21–30.
- Russell, P.S., Raj, S.E., & John, J.K. (1998). Multimodal intervention for selective mutism in mentally retarded children. *Journal of the American Academy of Child and Adolescent Psychiatry*, 37, 903–904.
- Rye, M.S., & Ullman, D. (1999). The successful treatment of long-term selective mutism: A case study. *Journal of Behavior Therapy and Experimental Psychiatry*, 30, 313–323.
- Schwartz, R.H., Freedy, A.S., & Sheridan, M.J. (2006). Selective mutism: Are primary care physicians missing the silence? *Clinical Pediatrics*, 45, 43–48.
- Schwartz, R.H., & Shipon-Blum, E. (2005). 'Shy' child? Don't overlook selective mutism. *Contemporary Pediatrics*, 22, 30–34.
- Shreeve, D.F. (1991). Elective mutism: Origins in stranger anxiety and selective attention. *Bulletin of the Menninger Clinic*, 55, 491–504.
- Sluckin, A., Foreman, N., & Herbert, N. (1991). Behavioural treatment programs and selectivity of speaking at follow-up in a sample of 25 selective mutes. *Australian Psychologist*, 26, 132–137.

- Standart, S., & Le Couteur, A. (2003). The quiet child: A literature review of selective mutism. *Child and Adolescent Mental Health, 8*, 154–160.
- Steinhausen, H., & Juzi, C. (1996). Elective mutism: An analysis of 100 cases. *Journal of the American Academy of Child and Adolescent Psychiatry, 35*, 606–614.
- Tatem, D.W., & DelCampo, R.L. (1995). Selective mutism in children: A structural family therapy approach to treatment. *Contemporary Family Therapy, 17*, 177–194.
- Toppelberg, C.O., Tabors, P., Coggins, A., Lum, K., & Burger, C. (2005). Differential diagnosis of selective mutism in bilingual children. *Journal of the American Academy of Child and Adolescent Psychiatry, 44*, 592–595.
- Torraco, R.J. (2005). Writing integrative literature reviews: Guidelines and examples. *Human Resource Development Review, 4*, 356–367.
- Valner, J., & Nemiroff, M. (1995). Silent eulogy: Elective mutism in a six-year-old Hispanic girl. *Psychoanalytic Study of the Child, 50*, 327–340.
- Vecchio, J.L., & Kearny, C.A. (2005). Selective mutism in children: Comparison to youths with and without anxiety disorders. *Journal of Psychopathology and Behavioral Assessment, 27*, 31–37.
- Watson, T.S., & Kramer, J.J. (1992). Multimethod behavioral treatment of long-term selective mutism. *Psychology in the Schools, 29*, 359–366.
- World Health Organization. (1992). *ICD-10: International statistical classification of diseases and related health problems*. Geneva: World Health Organization.
- Yanof, J.A. (1996). Language, communication, and transference in child analysis: I. Selective mutism: The medium is the message. *Journal of the American Psychoanalytic Association, 44*, 79–100.
- Yeganeh, R., Beidel, D.C., & Turner, S. (2006). Selective mutism: More than social anxiety? *Depression and Anxiety, 23*, 117–123.

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