

Increasing Verbal Behavior of a Student Who Is Selectively Mute

Paul Beare
Colleen Torgerson
California State University, Fresno
Cindy Creviston
Valley City Public Schools, North Dakota

Selective mutism is the term used to describe a disorder in which a person speaks only in restricted stimulus situations. Examination of single-subject research concerning selective mutism reveals the most popular and successful interventions to instate speech involve a combination of behavior modification procedures. The present research utilized exclusively positive reinforcement with fading of prompts to increase the verbal communication of a selectively mute 12-year-old, sixth-grade boy. The treatment increased the student's verbal communication with three adults in three different settings.

Keywords: *selectively mute; mutism; positive reinforcement; multiple baseline; emotional/behavioral disorder*

Selective mutism (SM) has been defined as the "consistent failure to speak in specific social situations in which there is an expectation for speaking" (American Psychiatric Association, 1994, p. 115). A child demonstrates language competence in some situations but fails to speak in others (Steinhausen & Juzi, 1996), such as classrooms and community settings (Giddan, Ross, Sechler, & Becker, 1997). The consistent failure to speak to teachers and peers in the classroom generally extends to other school environments, such as the lunchroom or playground (Hultquist, 1995; Krohn, Weckstein, & Wright, 1992).

Children who are selectively mute often exhibit appropriate use of expressive and receptive language in their home settings with parents or siblings (Krolian, 1988) but elect to be silent when they are in the presence of unfamiliar persons. Children with SM remain silent even when teachers or peers try to entice them to speak, criticize them for not speaking, or threaten them for not speaking (Harris, 1996). It is an impairing condition that interferes with both educational achievement and social acceptance (Grover, Hughes, Bergman, & Kingery, 2006).

Prevalence rates for SM vary in different studies, ranging from 0.08% to 1.9% (Bergman, Piacentini, & McCracken, 2002; Elizur & Perednik, 2003; Kopp & Gillberg, 1997). It is reported more often in females than males (Cunningham, McHolm, Boyle, & Patel, 2004; Hultquist, 1995; Tancer, 1992). Initially, children who exhibit SM may be diagnosed as being overly shy. Black and Uhde (1995) concluded that SM may best be viewed

as a symptom of social anxiety. In their research, 97% of a clinical sample of children with SM also were diagnosed with social phobia. Numerous studies have suggested that levels of anxiety for children in general tend to worsen over time and often persist into adulthood (Strauss, Lease, & Last, 1988). Steinhausen, Wachter, Laimbock, and Metzke (2006) found this particularly true of children with SM. Children do not simply "outgrow" SM (Manassis et al., 2003), and other issues may coexist in adulthood. A follow-up study of 41 young adults who were diagnosed with SM as children found that 60% continued to struggle with self-confidence, independence, achievement, and social communication (Remschmidt, Poller, Herpertz-Dahiman, Hannighausen, & Gutenbruner, 2001).

Giddan et al. (1997) recommended that the primary case manager should be a special education teacher or behavior analyst. They further recommended that the use of some form of applied behavior analysis be the primary treatment mode to encourage speech and its generalization across settings. Cunningham and McHolm (2001) and Crundwell (2006) recommended a gradual program that develops speech in a quiet area and then focuses on transferring the speech to new activities, locations, and individuals. Similarly, Krohn et al. (1992) reported in their review of the SM literature that most investigations employed some form of reinforcement in the treatment

Authors' Note: Please address correspondence regarding this article to Paul Beare, PhD, 5005 N. Maple Ave. MS/ED1, Fresno, CA 93740.

plans designed to reinstate speech in children who are selectively mute. Applied behavior analysis in various forms has also been reported in the literature to be the most effective treatment when compared to other commonly used interventions (i.e., family therapy, play therapy, psychodynamic counseling, and psychopharmacology) to help establish speech in children who elect to remain silent (Kratochwill, 1981; Labbe & Williamson, 1984; Loudon, 1987). Stone, Kratochwill, Sladeczek, and Serlin (2002), in the first comprehensive review of the treatment of SM, used nonparametric statistical tests of effect sizes in examining 20 single-subject and small-group research studies and concluded that behavioral treatment of SM is more effective than no treatment and that no advantage was seen in more complex combined approaches to treatment as opposed to simply using systematic reinforcement. A recent review of treatment efficacy for SM published by Cohan, Chavira, and Stein (2006) likewise found that reinforcement regimens were effective as a treatment mode and that multimodal treatments, though promising, have yet to establish a replicable regimen. Examples of applied behavior analysis interventions that have been utilized to help children who are selectively mute include contingency management, stimulus fading, shaping, desensitization, extinction, and application of aversives (Albert-Stewart, 1986; Bailey & Hirst, 1991; Kehle, Owen, & Cressy, 1990; Labbe & Williamson, 1984; Masten, Stacks, Caldwell-Colbert, & Jackson, 1996; Porjes, 1992; Richburg & Cobia, 1994). These studies also reported that the single-subject research design is the most appropriate design for analyzing the effect of individualized treatment plans that utilize some form of applied behavior analysis techniques for treating children who are selectively mute.

Finally, several studies indicated that the use of reinforcement and stimulus fading have demonstrated clear success (Auster, Feeney-Keller, & Kratochwill, 2006; Cunningham, Cataldo, Mallion, & Keyes, 1984; Giddan et al., 1997; Hultquist, 1995). These studies cited the need for future research to provide additional support of these two techniques. Specifically recommended was the use of single-subject research designs to determine the effectiveness of contingency management and stimulus fading for treating children who do not speak in specific situations.

The purpose of this article is to present a single-subject research study designed to examine the effectiveness of contingent positive reinforcement and stimulus fading techniques in helping to establish the speech of a 12-year-old student who was selectively mute at school. More specifically, this study was designed to determine if the reinforcement, paired with stimulus fading, would increase the verbal communication of the student and if this increase could be replicated across settings. The

findings add to the body of literature on the effectiveness of these techniques in establishing speech in children who are selectively mute. A key value is the simplicity and the replicable nature of the design and treatment.

Method

Participant

Luke, a 12-year-old, sixth-grade male student, lived with his biological parents and an older sister. Luke was originally assessed for special education services when he was 5 years old and in kindergarten; the teacher noted he rarely spoke, and when he did, it was not above a whisper. He was not given a label at that time but was prescribed a 30-day trial in a self-contained classroom for children with emotional and behavioral disorders (EBD). His educational history included a variety of settings and levels of treatment, and eventually he was given the EBD label. However, at the time of the study, Luke was placed in a general education classroom with a management aide and 30 minutes per day of resource support by a teacher with credentials in EBD. The critical result of all placements and interventions to date was that Luke did not speak in school settings.

Luke obtained a Performance scale score of 90 on the *Wechsler Intelligence Scale for Children-III* (WISC-III; Wechsler, 1991). He did not exhibit sufficient verbal expression to allow computation of a Verbal scale score. This result appeared to be consistent with results on the *Woodcock-Johnson Tests of Achievement-Revised-Part II* (Woodcock & Johnson, 1990). Responding with written answers, Luke's standard scores fell in the average range on the Math and Written Language subtests. Reading and Knowledge subtests were not administered because of the requirement for oral responses.

Although Luke had other educational goals, the ultimate target for this intervention was for Luke to speak in the regular classroom with few or no prompts. The approach decided upon was to reinforce verbalization while fading the intensity of prompts in establishing oral responses in settings that increasingly approximate the regular classroom.

Research Design

An A-B-B' multiple-baseline design across settings was utilized. The dependent variable was the verbal responses made by Luke. Two measures were used: The first was the number of responses; the second, the rate of words spoken. A "response," which might be any number of words, was scored if Luke made an intelligible verbal reply to a question or the preceding verbal prompts. "Words" was the rate of words said aloud per minute.

The independent variable was positive reinforcement delivered for meeting that day's goal. The criterion for earning the reinforcer changed each day in that the number of prompts allowed was faded. The B condition indicates the period where the number of prompts delivered was reduced daily. B' indicates the goal condition, when three or fewer prompts were the maximum to receive the reinforcer.

Settings

Resource room. This 10' × 14' room contained five study carrels, two teachers' desks, and a round table, the type of which was used for the intervention in all three locales. Only Luke and the EBD teacher were present except when second-observer data were taken.

Study room. This 6' × 10' room was directly across from Luke's mainstream classroom and contained two tables and two desks. Only Luke and his management aide were present except on second-observer reliability days.

Mainstream classroom. This 20' × 30' room contained desks for 28 students, two teachers' desks, and one round table. The atmosphere in the classroom was pleasant, though the noise and activity levels appeared to be high. The round table used for the intervention was at the back of the room. The general education teacher and students were present during intervention.

Procedure

Luke's failure to speak was adjudged an internalizing behavior of unknown etiology. Internalizing behaviors pose conceptual and practical challenges to conventional functional analysis procedures and, in general, a comprehensive approach to such analysis for SM is not currently possible (Kern, Starosta, Cook, Bambara, & Gresham, 2007). Functional analysis proved futile in this case. When Luke spoke in other settings, he had normal tonal quality and his phonation and voice quality were good. Persons in these settings responded in no unusual manner. Observations across school settings showed he did not speak in any of them. Varying environmental conditions, including having him work in large groups, one-on-one with a teacher, or in small groups, all failed to produce verbal behavior. Luke followed verbal directions and communicated nonverbally through pointing, smiles, and head nods or shaking; thus he had access to many of the outcomes he would have gained through verbalizations.

Intervention. After the failure of intervening through placement in a variety of special education settings and,

in previous placements, the use of aversive interventions, it was decided that the most appropriate strategy would be a simple reinforcement procedure that could be replicated across school settings. It was also thought that if such a simple intervention were effective, it would serve as a good model for similar cases that have proven resistant to change. Fading is a primary and critical component of most behavioral treatments of SM, because appropriate intervention aims for an ever-larger number of situations to become discriminative stimuli for speaking (Labbe & Williamson, 1984). Typically, treatment begins in a situation where the child will, with sufficient prompting, respond verbally and then progresses gradually to situations that successively approximate the desired stimulus condition (Holmbeck & Lavigne, 1999). In the present study, stimulus fading was used in two ways, changing settings to approximate the general education classroom and fading the prompts used within each setting to obtain speech once the reinforcement condition was implemented. The special class was the first setting where verbalizations were established, the study room second, and the general education classroom third. In each setting, the number of prompts allowed to receive the reinforcer was reduced, and their intensity was faded, from being full-voice prompts to whispered prompts.

Baseline. Luke was brought to the special education resource room where he worked with the EBD teacher on social skills each school day. He was told to sit down in the chair across from the teacher and answer specific questions that varied from session to session but were all taken from the *Boys Town Social Skills* (Dowd & Tierney, 1992) curriculum, which served as a source of instruction in this setting. The skills consisted of steps that Luke was required to repeat and then practice to demonstrate the component behaviors of introducing himself, giving negative feedback, resisting peer pressure, or giving a compliment. He was given verbal prompts to answer specific questions, including the teacher's saying the answer so all Luke would have to do was imitate. This same type of prompting was used in each setting.

In the study room, he was asked questions about his written language or reading. The questions varied from session to session but focused consistently on his written language or reading, because these were subjects in which he willingly engaged.

When the setting was the mainstream classroom, Luke was asked to sit at the table in the back of the classroom. He was told that he would be working on homework with which he had difficulty. During baseline in each setting, Luke was not offered any incentive to exhibit verbal responses. The data were collected in each setting using event recording during a 30-minute time period. Baseline

lasted for 5 sessions in the special education resource room, 14 sessions in the study room, and 27 days in the mainstream classroom.

Three persons were involved in the procedure: the EBD teacher, Luke's management aide, and Luke's general education teacher. In the resource room, the EBD teacher delivered the instruction, and the aide took reliability data. In the study room, this was reversed. In the general education classroom, that teacher delivered the treatment, and the EBD teacher took reliability data. Prior to the advent of the data collection, the three consulted on the procedure and did role-playing of data collection, reinforcement delivery, and the prompting/prompt-fading procedure until acceptable practice reliability data were obtained. The EBD teacher was the lead for the entire project and directed the training.

Reinforcement with systematic fading of prompts. As the intervention was introduced in each setting, Luke was instructed to select a reinforcer he would like to earn during the session. He was told that if he could verbally respond to the questions, in a voice loud enough to be heard by the teacher, 20 times with only 12 reminders (verbal prompts), he could have the reinforcer he selected from a menu of choices. After each session, Luke was asked if he would like to try for another reinforcer during the next session with fewer reminders. The number of reminders was reduced in successive sessions from 12 to 10, 8, 6, then 4 during the 5 days labeled "Reducing Prompts" on the graphs of data collected in the resource and study rooms. The final reduction was to 3 or fewer prompts to exhibit at least 20 verbal responses. Luke was told the "reminder" level would be 12 for the 1st day, but he needed only 1 prompt; on the 2nd day, he needed none, despite being told he could have 10. It was decided to move him directly to the less-than-4 level at that point. The reinforcers available included his choice of small edible reinforcers, such as candy or soda; game time with an adult; or 5 minutes of free time. All prompts used were verbal. Each time Luke responded to a prompt, the instructor in that setting used a softer voice for the next prompt. The teachers attempted to be systematic in this fading; however, without automated equipment, it was always a subjective effort.

Results

Interobserver Reliability

Interobserver reliability for the study was taken 15 times, on Sessions 3, 10, 13, 18, and 27 in each of the three settings. The primary observer was the person

directly working with Luke. The aide collected the comparison data in the resource room; the EBD teacher, in the other two rooms. There was 100% agreement for verbal responses. Agreement ranged from 86% to 100%, and averaged 94%, for word count. Reliability was calculated by dividing the lower recorded frequency by the higher recorded frequency for each session each day. Scores such as these are considered acceptable (Tawny & Gast, 1984).

Data

Verbal responses. In the resource room, the data for the number of verbal responses made by Luke during baseline was 0 (see Figure 1). During the reinforcement-with-fading-prompts process, the mean was 25. There was zero overlap between the conditions. The last day of baseline was 0; the 1st day of fading was 20. The three-or-fewer prompt condition (B') in the resource room had a mean of 33. The trend during B' was zero acceleration. There was no overlap with baseline.

In the study room, the baseline for verbal responses showed zero acceleration and a mean of 0.9. During the reinforcement with fading prompts, the mean was 23, with zero overlap with baseline. B' showed zero acceleration, with a mean of 32 and zero overlap with baseline. The last day of baseline was 0; the 1st day of intervention was 20.

In the mainstream classroom, the baseline for verbal responses showed zero acceleration and a mean of 3.4. The fading procedure resulted in a mean of 25. The B' condition showed zero acceleration, with a mean of 34. There was zero overlap with baseline. The last day of baseline was 2; the 1st day of intervention was 25.

The baseline in the study room showed no effect from the application of intervention in the resource room. The baseline in the mainstream classroom showed no effect from the intervention in either of the other two settings; thus there was no covariation. Speaking in the subsequent settings was not affected by the change in behavior in the resource room or in both resource and study rooms. These data meet all criteria for demonstrating a functional relationship between the intervention and the change in behavior, large mean change, large changes upon intervention, no overlap, no variability, and no covariance among settings.

Words per minute. In the resource room, the rate of words spoken during baseline was 0 (see Figure 2). During the fading procedure, the mean rate per minute was 2.9. The last day of the baseline was 0; the 1st day of intervention was 2.6. B' in the resource room had a mean of 3.2. The trend on the intervention was zero acceleration, with no overlap with baseline.

Figure 1
Verbal Responses Made per 30-Minute Session
Across Three Settings

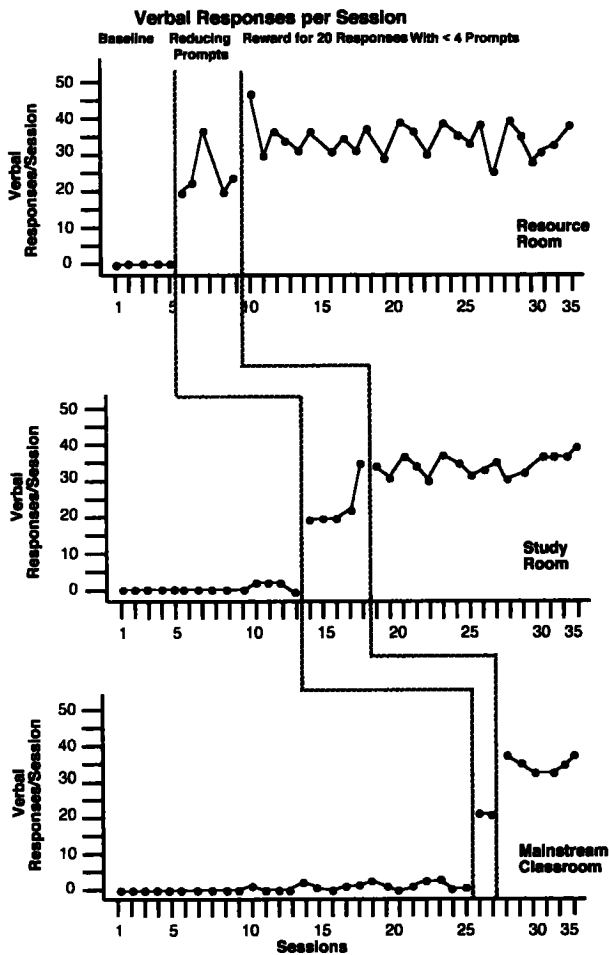
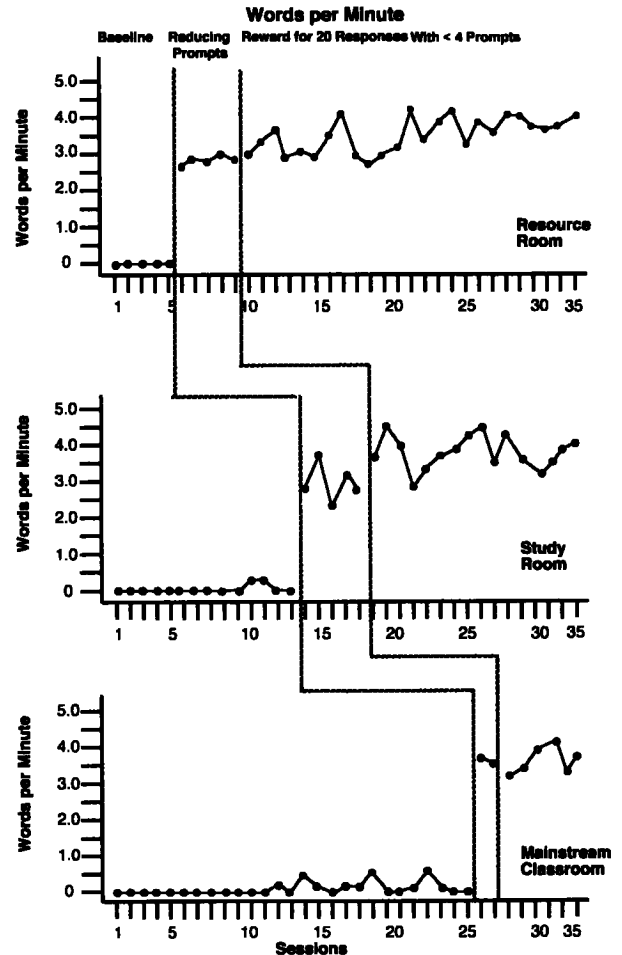


Figure 2
Words Spoken per Minute Across
Three Settings



In the study room, the baseline for word count showed zero celeration and a mean rate of < 0.1 per minute. The application of the fading procedure resulted in a mean of 3.1. B' showed zero celeration, with a mean of 3.5 per minute and zero overlap with baseline.

In the mainstream classroom, the baseline for word count showed zero celeration and a mean of 0.1 per minute. The fading procedure resulted in a mean of 3.4 per minute. The intervention showed zero celeration, with a mean of 3.5 and zero overlap with baseline. The last day of baseline was 0.1 per minute; the 1st day of the fading procedure was 3.4.

The baseline in the study room showed no effect from the application of the fading procedure or the intervention in the resource room. The baseline in the mainstream classroom showed no effect from the intervention in either of the other two settings. There was no covariance across settings observed. Like the data for verbal responses, these

data demonstrate a clear functional relationship between the intervention and rate of words spoken.

Discussion

The purpose of this study was to determine the effect of a program of positive reinforcement with systematic fading of prompts on increasing the verbal behavior of a 12-year-old, sixth-grade student who was selectively mute. The results indicated that the reinforcement was effective in increasing Luke's verbal communication in three different environments. The student was verbally communicating with adults in the environments indicated when under the positive reinforcement contingency. The responsibility for the change clearly lay with the reinforcer rather than some other intervening variable in that the behavior change in each setting was concurrent with

the implementation of the reinforcement condition. The fading procedure worked exactly as anticipated, with no need to retrace steps of the planned intervention. The teacher in each setting not only was giving few prompts but also was whispering the prompts by the conclusion of the fading period.

This finding, indicating an increase in verbal responses and words used, lends support to prior research indicating the efficacy of positive reinforcement in increasing speech (Albert-Stewart, 1986; Auster et al., 2006; Cohan et al., 2006; Kratochwill, 1981; Krohn et al., 1992; Masten et al., 1996; Richburg & Cobia, 1994). As supported by virtually all authors, there was no indication that aversives should have been used or would have increased the treatment effect (e.g., Harris, 1996; Porjes, 1992; Tancer, 1992).

The teacher in this study was the primary case manager, as recommended by Giddan et al. (1997), eliminating the need for an external therapist. The use of the selection of a reinforcer from a menu supports the work of Amari, Slifer, Gerson, Schenck, and Kane (1999) and Porjes (1992). The addition of stimulus fading procedures to the reinforcement condition was used in the treatment of SM by Masten et al. (1996), as well as Watson and Kramer (1992). The change of stimulus setting and gradually introducing interventions across settings was important in establishing verbal behavior and supports the work of Crundwell (2006) and Cunningham and McHolm (2001).

Once the intervention began in the first setting, Luke showed excitement by watching the clock and coming out of his mainstream classroom with the designated adult with no verbal prompts. Luke spoke about the reinforcer he would work for at the end of each session and would verbalize how he was going to use free time if that was the reinforcer chosen. He would run down the stairs to the special education room to receive the reinforcer earned in other settings. As the study progressed successfully, other teachers voiced that Luke was benefiting from receiving positive reinforcements for his efforts and requested the intervention be carried over to their classrooms.

Conclusion and Recommendations

The use of positive reinforcement for speaking with fading of prompts across settings was successful in causing Luke to exhibit verbal speech in all three rooms for the first time. This was a major accomplishment; however, speech in response to tangible reinforcement is not the same as spontaneous speech in those same public settings. Because the school year ended soon after the completion of the data

collected, it is not clear if Luke would have generalized the increase in verbal communication outside the controlled environment, with other adults, or with his peers. This is a major limitation. Luke had not done so by the completion of the school year 1 week hence. Porjes (1992) also found that reinforcing and establishing verbalizations in environments did not transfer to crucial everyday settings without specific treatment; however, other authors (Reid et al., 1967) found generalization and maintenance without other steps when stimulus fading had been used to establish speech across settings.

It is recommended that measurement in settings external to the treatment settings should be implemented to determine generalization in future research. Had time allowed, this study would have incorporated a peer as the social stimulus, as suggested by Ciottone and Madonna (1984), versus using an adult in all settings. This would allow the area of social skills toward peers to develop concurrently with speaking in the various settings. It would also be recommended that this study be replicated in other settings with other teachers to enhance the external validity.

The level of reinforcers included tangibles, generally a low-level reinforcer for a sixth grader. Future studies should thin and then replace such strong reinforcement with higher level social reinforcers or reinforcers more typical to the general education setting. Reinforcement could be delivered by adults or peers in the hallway, lunchroom, or playground. Contingencies that would provide social interaction outside the school environment should be used to extend such interventions to other environments. For example, a field trip to an eating establishment of the participant's choice would be an excellent reinforcer, particularly if it involved peers. This would involve tangible reinforcement delivered concurrently with social interaction.

The gradual fading of prompts to a minimal level was effective, and the lack of covariation of the data path across the different settings demonstrated the functionality of the intervention. As with any research that describes an individual with a presenting characteristic, caution should be used in making assumptions about the heterogeneous group from which the student is drawn. As pointed out by Sharp, Sherman, and Gross (2007), SM presents a high rate of comorbidity that could complicate the etiological picture as well as the assessment and treatment of the condition. This is counterbalanced by the reality that if a simple, positive procedure can alleviate the mutism, that is one behavior problem that is no longer in the mix of difficulties faced by the individual. If anxiety is the basis for the problem, other work will likely be needed, but the child can be referred for appropriate treatment, and the

family as well as educators can be involved in dealing with the situation. Teachers certainly should try a positive reinforcement procedure to prompt verbal behavior before reaching this conclusion.

References

- Albert-Stewart, P. L. (1986). Positive reinforcement in short-term treatment of an electively mute child: A case study. *Psychological Reports, 58*, 571–576.
- Amari, A., Slifer, K. J., Gerson, A. C., Schenck, E., & Kane, A. (1999). Treating selective mutism in a pediatric rehabilitation patient by altering environmental reinforcement contingencies. *Pediatric Rehabilitation, 3*, 59–64.
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Auster, E. R., Feeney-Keller, K. A., & Kratochwill, T. R. (2006). Conjoint behavioral consultation: Application to the school-based treatment of anxiety disorders. *Education and Treatment of Children, 29*, 243–256.
- Bailey, S., & Hirst, S. (1991). A child who does not speak at school: The constructive use of a support worker for behavior. *Maladjustment and Therapeutic Education, 9*, 104–110.
- 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.
- Ciottono, R. A., & Madonna, J. M. (1984). The treatment of elective mutism: The economics of an integrated approach. *Techniques, 1*, 23–30.
- Cohan, S. L., Chavira, D. A., & Stein, M. B. (2006). Practitioner review: Psychological interventions for children with selective mutism: A critical evaluation of the literature from 1990–2005. *Journal of Child Psychology and Psychiatry, 47*, 1085–1097.
- Crundwell, R. M. A. (2006). Identifying and teaching children with selective mutism. *Teaching Exceptional Children, 38*(3), 48–54.
- Cunningham, C. E., Cataldo, M. F., Mallion, C., & Keyes, J. B. (1984). A review and controlled single case evaluation of behavioral approaches to the management of elective mutism. *Child and Family Behavior Therapy, 5*(4), 25–49.
- Cunningham, C. E., & McHolm, A. (2001). *COPEing with selective mutism: A collaborative school-based approach. Consultants manual*. Hamilton, ON, Canada: Cope Works.
- 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.
- Dowd, T., & Tierney, J. (1992). *Teaching social skills to youth*. Omaha, NE: Boys Town Press.
- 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.
- Giddan, J. J., Ross, J. R., Sechler, L. L., & Becker, B. R. (1997). Selective mutism in elementary school: Multidisciplinary interventions. *Language, Speech, Hearing Services in Schools, 28*, 127–133.
- Grover, R. L., Hughes, A. A., Bergman, R. L., & Kingery, J. N. (2006). Treatment modifications based on childhood anxiety diagnosis: Demonstrating the flexibility in manualized treatment. *Journal of Cognitive Psychotherapy: An International Quarterly, 20*, 275–286.
- Harris, H. F. (1996). Elective mutism: A tutorial. *Language, Speech, Hearing Services in Schools, 27*, 10–15.
- Holmbeck, G. N., & Lavigne, J. V. (1999). Combining self-modeling and stimulus fading in the treatment of an electively mute child. In S. A. Spasaro & C. E. Shaefer (Eds.), *Refusal to speak: Treatment of selective mutism in children* (pp. 91–108). Northvale, NJ: Jason Aronson.
- Hultquist, A. M. (1995). Selective mutism: Causes and interventions. *Journal of Emotional and Behavioral Disorders, 3*, 100–107.
- 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.
- Kern, L., Starosta, K. M., Cook, C. R., Bambara, L. M., & Gresham, F. R. (2007). Functional assessment-based intervention for selective mutism. *Behavioral Disorders, 32*, 94–108.
- Kopp, S., & Gillberg, C. (1997). Selective mutism: A population-based study: A research note. *Journal of Child Psychology and Psychiatry, 38*, 257–262.
- Kratochwill, T. R. (1981). *Selective mutism: Implications for research and treatment*. Hillsdale, NJ: Lawrence Erlbaum.
- Krohn, D. D., Weckstein, S. D., & Wright, H. L. (1992). A study of the effectiveness of a specific treatment for elective mutism. *Journal of American Academy of Child and Adolescent Psychiatry, 31*, 711–718.
- Krolian, E. B. (1988). Speech is silver, but silence is golden: Day hospital treatment of two electively mute children. *Clinical Social Work Journal, 16*, 355–377.
- Labbe, E. E., & Williamson, D. A. (1984). Behavioral treatment of elective mutism: A review of the literature. *Clinical Psychology, 4*, 273–292.
- Louden, D. M. (1987). Elective mutism: A case study of a disorder of childhood. *Journal of the National Medical Association, 79*, 1043–1048.
- 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.
- Porjes, M. D. (1992). Intervention with the selectively mute child. *Psychology in the Schools, 29*, 367–376.
- Reid, J. B., Hawkins, N., Keutzer, C., McNeal, S., Phelps, R., Reid, K. M., et al. (1967). A marathon behaviour modification of a selectively mute child. *Journal of Child Psychology and Psychiatry, 8*, 27–30.
- Remschmidt, H., Poller, M., Herpertz-Dahiman, B., Hannighausen, K., & Gutenbruner, C. (2001). A follow-up study of 45 patients with elective mutism [Electronic version]. *European Archives of Psychiatry and Clinical Neuroscience, 251*, 284–296.
- Richburg, M. L., & Cobia, D. C. (1994). Using behavioral techniques to treat elective mutism: A case study. *Elementary School Guidance and Counseling, 28*, 214–220.
- Sharp, W. G., Sherman, C., & Gross, A. M. (2007). Selective mutism and anxiety: A review of the current conceptualization of the disorder. *Journal of Anxiety Disorders, 21*, 568–579.
- 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.

- Steinhausen, H., Wachter, M., Laimböck, K., & Metzke, C. W. (2006). A long-term outcome study of selective mutism in childhood. *Journal of Child Psychology and Psychiatry*, *47*, 751–756.
- Stone, B. P., Kratochwill, T. R., Sladeczek, I., & Serlin, R. C. (2002). Treatment of selective mutism: A best-evidenced synthesis. *School Psychology Quarterly*, *17*, 168–190.
- Strauss, C. C., Lease, C. A., & Last, C. G. (1988). Overanxious disorder: An examination of developmental differences. *Journal of Abnormal Child Psychology*, *16*, 433–433.
- Tancer, N. K. (1992). Elective mutism: A review of literature. *Advances in Clinical Child Psychology*, *14*, 265–288.
- Tawny, J. W., & Gast, D. L. (1984). *Single subject research in special education*. Columbus, OH: Merrill.
- Watson, T. S., & Kramer, J. J. (1992). Multimethod behavioral treatment of long-term selective mutism. *Psychology in the Schools*, *29*, 359–366.
- Wechsler, D. (1991). *Wechsler Intelligence Scale for Children—Third Edition manual*. New York: Psychological Corporation.
- Woodcock, R. W., & Johnson, M. B. (1990). *Woodcock-Johnson Psycho-Educational Battery—Revised*. Allen, TX: DLM Teaching Resources.
- Paul Bearc**, PhD, is a professor of special education and dean of the Kremen School of Education and Human Development at California State University, Fresno.
- Colleen Torgerson**, EdD, is an associate professor of special education with a focus on deaf studies and mild disabilities and associate dean of the Kremen School of Education and Human Development at California State University, Fresno.
- Cindy Creviston**, MS, is a special education teacher in the Valley City, North Dakota, public schools. Her focus is on emotional and behavioral disorders and learning disabilities.