“Interventions in Elective Mutism”

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Abstract

In this study of 122 children displaying elective mutism, three interventions were used: a) behaviour modification using either positive or negative reinforcement, applied to 24 cases and successful in 5; b) desensitization, applied in 15 cases and effective in 8; c) one-to-one method, a specially designed approach, applied in 109 cases and successful in 108. Success of interventions was determined by its efficacy, efficiency and simplicity

Elective mutism, a term first employed by Trainer (1934) has traditionally been used to describe those children who refuse to speak to all but a small number of intimates. This definition excludes all other nonpsychogenic forms of mutism including hearing loss, aphasia, schizophrenia and autism.

In the first part of this study reported separately (Classifications of Elective Mutism), the parameters of elective mutism were examined and resulted in a 4-part classification. Despite the value of acquiring a large sample size and detailed systematic observations which subsequently allowed for a more complete view of elective mutism, successful treatment of this complex phenomenon is far more important.

LITERATURE REVIEW

Intervention into elective mutism has had mixed results despite the vast array of treatments tried. Standard individual therapy or collateral family therapy was used by Adams and Glasner (1954), Brown, et al. (1963), Chetnik (1973), Halpern et al. (1971), Moral et al. (1962), Pangalila-Ratulangie (1959), Pustrom and Speers (1964), and Reed (1963). Obviously because of the nature of the therapeutic setting which relies largely on the client interacting verbally with therapist, this approach can be an extraordinarily frustrating experience for the therapist as Mora (1962) Chetnik (1973) , and Ruzicka and Sackin (1974) commented. These children are skilled at their craft and few therapists have been trained in how to cope with such a setting. Understandably the results were not good. Changing the child's environment such as placement in inpatient units or residential schools has resulted in somewhat greater success (Amman, 1958; Elson et al., 1964; Wassing, 1973).

Using a more direct approach to the problem, wherein suggestion combined with more traditional techniques, produced sporadic success (Froschels, 1926; Heuyer and Morgenstern, 1927; Kistler, 1927; Wright, 1968).

Perhaps the most widely reported intervention method has been behavioral therapy (Brison, 1966; Calhoun and Koenig, 1973; Colligan et al., 1977; Conrad et al, 1974; Friedman and Karagan, 1973; Griffith et al., 1975; Kass et al., 1967; Nolan and Pence, 1970; Rasbury, 1974; Reid et al., 1967; Rosenbaum and Krellman1973; Sines, 1967; Sluckin and Jehu, 1969; Straughan et al., 1965; Van der Kooz and Webster, 1975). The success of this method in the literature is high but perhaps somewhat misleading. Nearly all the cases reported are single case studies, and it is difficult to know how many unsuccessful behavioral interventions have been tried. Among the sample population in this study 94% of the children had previously participated in one or more behavioral intervention programs for their elective mutism and 3% of those children had participated in behavioral treatment programs planned and managed by individuals with published articles on behavioral interventions into elective mutism. Thus it is difficult to conclude definitively that behavioral therapy is generally successful.

Rosenberg and Lundblad (l978) tried a mixture of behavior and family approaches in 10 cases with considerable success.

Although many of the above mentioned methods have been successful, all suffer from one or two major drawbacks. First, all the cases had lengthy intervention times. The individual psychotherapy methods ranged over a period of years, often with no results apparent for 12 or more months after the start of therapy, whereupon it is difficult to conclude that a change in the mute behavior was a result of the therapy. Even in the behavioral methods, where correlation between the treatment and speech was more apparent, the intervention period was long. 16 weeks appeared to be average of those authors who reported length with the exception of a one-day program reported by Reid at al. (1967),

Although speed has never been a requirement of good therapeutic intervention, it is a major asset. As well as providing earlier access to what the child feels and thinks by producing speech more quickly, it ensures a clear connection between treatment and results, produces the least trauma to the settings where the intervention takes place, and helps alleviate related problems such as school progress. It also lessens the eloquently expressed frustration described by Ruzicka and Sackin (1974).

A second major drawback particularly of the behavioral methods is the necessity of this intervention to greatly restructure the environment to accommodate the intervention. Because of this restructuring, a considerable amount of cooperation is needed from parents, teachers and other school personnel as well as the therapist and his staff. Since this cooperation is required over a long period of time, particularly in the school, more programs probably fail

by default than by program design. While definitely interested in the welfare of the electively mute child, many teachers or school staff feel the requirements of the special program are often more than they realistically can accommodate.

Thus, with the problems presented by the current interventions used, it is necessary to determine a more effective and efficient treatment.

The study reported here was undertaken to develop a successful intervention method.

METHODS

Population.

A sample of 68 children was used to detemine the parameters and classification of elective autism. These same 68 children also participated in development of intervention techniques. However, refinement of these techniques was seen as useful, consequently an additional sample of 54 children was used for a total sample of 122.

Table 1
Demography of Sample Population

		Girls	Boys
Age Range	3-1 to 5-12	5	5
	6-0 to 7-12	24	17
	9-0 to 9-11	17	11
	10-0 to 11-12	16	8
	12-0 to 13-12	5	6
	14-0 to 15-12	2	4
	16-0 to 17-12	6	6
	18-0 to 19-4	2	0
IQ Range	40 to 54	1	1
	55 to 69	4	6
	70 to 84	9	6
	85 to 99	17	8
	100 to 114	15	10
	115 to 129	16	9
	130 to 144	9	5
	145 plus	4	2
Race	Asian-American	2	0
	Black	8	7
	Mexican - American	3	2
	Native American	4	3
	White.	58	35
Income Bracket*	High ($5573 or more per person)	15	15
	Middle	33	15
	Low ($2396 or less per person)	25	17
Classification	Symbiotic	44	28
	Speech Phobic	6	2
	Reactive	15	3
	Passive Aggressive	10	14

* As established by the Bureau of Labor Statistics, U.S. Department of Labor, 1976.

The original 68 children in the study met a series of specific criteria to be included: 1) the child had to have displayed normal speech and speech patterning in at least one previous circumstance for a period of six months or more; 2) he must have displayed totally mute behavior in at least one major setting for a period of 8 weeks; 3) he must have demonstrated an IQ of 70 or above as substantiated by the Wechsler Intelligence Scale for children or Stanford Binet; and 4) the child had to be free of the clinical diagnosis of psychosis, including autism.

Because several of these criteria were set arbitrarily in an attempt to eliminate as many confounding variables as possible, it was felt that perhaps a number of false negatives were occurring; that is, genuine elective mutes were being excluded because they did not meet the determined criteria. Since the confounding variables could be potentially dangerous in defining parameters or classifications of elective mutism, only the 63 were used in 'Classifications of Elective Mutism'. However, since the confounding variables were less important in determining an intervention and inclusion of as many true elective mutes as possible was desirable, the criteria were revised for the second sample of 54 youngsters. To be included in the second sample the child must have displayed normal speech, speech patterning and speech development in at least one previous circumstance for a period of 6 months or more. Second, he must have displayed totally mute behavior in at least one setting for a period of 8 weeks. The requirements for IQ and non-psychotic diagnosis were dropped. Children with speech impairment such as cleft palate, stuttering and articulation difficulties were included. Also included were bilingual children whose parents could verify the child's knowledge of English.

Only 72 children seen were rejected for possible contaminating factors. The majority of these children were rejected because of aphasia or autism rather than elective mutism, evidenced by the fact that they never met the normal speech criterion. 4 children under the age of 5 were reported electively mute but not seen because of the apparent normalcy of this behavior developmentally in children of that age. All 4 were requested to return in 6 months if the behavior did not change. 3 spontaneously resumed speech and 1 was admitted to the study.

In Table 1, data of community size and geographical distribution were deleted because the second sample all came from in and around the same major metropolitan area.

Procedures.

The ideal intervention was conceptualized as one which had the following features: 1) it was uncomplicated so only a minimal amount of bookkeeping was necessary and it was easily understood by someone not designing the program; 2) it required minimal restructuring of the environment(s) where the child was mute, given that the environments were not pathological; 3) the intervention could be initiated and carried out in the major environment where the mutism was displayed (this was assumed to be the school); 4) it could he carried out without undue interference by persons instructed in the method but lacking in-depth psychological or psychiatric training; 5) results were easily recognizable; and 6) it evoked reasonably speedy results both in initial speech with the intervenor and in generalization to other settings.

3 factors influenced the determination of possible methods: 1) whether the literature was providing a background of what had been tried; 2) the author's training in behavior management; and 3) the author's experience as a classroom teacher of emotionally disturbed youngsters which included electively mute children.

Consequently 3 methods were determined as feasible possibilities to approach the ideal intervention.

Behavior modification (BM+) Positive Reinforcement

This method followed relatively standard procedures for behavior modification. Three variations were used:

The child interacted with the intervenor for a positive event contingent on speech. No quantity of speech was designated although the period when the speech should occur was specified. For example, one girl contracted to go to the amusement park with the intervenor if she read aloud in reading 5 days in a row. Another child contracted to be the class messenger contingent on her giving the message verbally to the recipient.

The child was placed in a program. Although the child usually agreed to the situation, he was not part of the negotiations, generally because of his age, IQ or refusal. The child earned positive consequences for a specific quantity of speech in a specific situation. For example, one child earned tokens during the school day for each response he gave to questions the teacher asked. These tokens were exchangeable for candy, small toys or privileges.

The other children around the mute were reinforced for providing opportunities for the child to talk, refusing to attend to his nonverbal communications, refusing to speak for the child, and in some instances, ignoring the child's special treatment on the reinforcement schedule. For instance, one class earned a class party by receiving tokens every time they refused to "baby" the mute child or every time they asked her questions requiring verbal responses and then waiting long enough for her to respond.

Behavior modification (BM-) Negative reinforcement

This method has been described in other treatment programs for elective mutes. It involved the child being placed in a slightly negative situation and being removed when he spoke. A classic example of this method is the instance when the child has to say "goodbye" to the teacher before being allowed to go home from school.

Desensitization (D)

This method is well known and described in the literature. The hierarchies were established by the intervenor with the child's parents or the child himself if he could write. Then starting with the situation which was least fear-provoking while speaking and gradually introducing more threatening situations, the child progressed towards normal speech. Older children or motivated children also used relaxation exercises in some instances. The two primary variations of this method were: 1) placing them in a non-threatening environment and gradually introducing new people; or 2) going through progressive approximations of speech including mouthing and whispering.

One to one method (1/1)

Inspired by Wright's (1968) article and based primarily on the author's experience in setting expectations with electively mute children as well as other types of disturbed children, this method consisted of the child and intervenor meeting together in the school for daily 30-minute sessions. Preferably they were in the major mute environment in an isolated setting such as an office, spare room, or book closet. The intervenor gave a standard patter which set expectations, explained his job, and what he and the child were going to be doing. The nature of a sample patter might be: "Hi, I am Torey and I work with people who have a hard time talking at school like you do. I have helped these kids to talk and now I am here to make it easier for you. I know how hard it is to be in school all day and not talk, so it will be much easier when we don't have to worry about that. Now, the first thing you must do is talk with me. Now. I know it is very hard to do the first time, but really the first time is the hardest. It is very scary, but once that first word is out, it is all over and then it's easy. Then we won't have

to worry about it anymore and can go on and do more fun things. Lots of kids get really scared and sometimes even angry and they cry some at first, but that's OK. I know how hard it is, but you will be able to do it." The child is then presented a low-key task which requires a spoken answer. The question or task should be simple but age appropriate, impersonal and non-threatening, not requiring eye contact. Naming colors, identifying parts of a picture, or reading aloud are all good examples. Asking about personal things such as the child's name, age, family members, or clothing or such questions as "Why don't you talk at school?" "How does your voice sound?" or "How are you feeling right now?" are all asking for trouble.

For those who did not respond, the question was repeated. Frequent interjections from the intervenor such as "What is that?" "What are your thoughts?" and tapping the item with fingers or a pencil while waiting for the answer were helpful. Apparently such frequent interruptions did not allow the child to collect his wits enough to concentrate on being silent. The object was to focus the child's attention on the question and not on anything else, including his mutism. If after three or four repetitions of the task question with these interceding focal behaviors the child did not respond, it was dropped and a second activity was introduced, equally low key, with the same opportunities for speech. The intervenor kept a simple but rather constant chatter going over the material, all in a very business-like manner. Reinforcing behaviors such as holding the child, comforting him if he was crying, were not engaged in. If the child did begin to cry, it was acknowledged with a statement such as "This is hard but you are trying. It will get easier."

A major factor in this intervention is the presentation of a calm, business-like, firm but positive approach on the part of the intervenor. The intervenor is not angry with the child and he is not emotionally involved with the child's behavior. This must be clear in the intervenor's manner.

Similarly, the intervenor must appear very confident that the child is going to speak. He has set up expectations that the child will speak in his patter. He must demonstrate his belief in this by his confidence and lack of frustration with the child's attempts not to speak, including tears and tantrums. A direct statement to the nature of "Please sit down until you finish crying and then we'll try again. It's hard to do this, I know, and I'm glad you are trying so hard," usually addresses the behavior adequately. Similarly, if the child has not spoken by the end of the session, the intervenor can confidently promise the child that he will be back to work with the child until they fix the problem together.

To satisfy the time requirement, an arbitrary decision was made to allow a maximum of 10 treatment days from initiation of the program to production of initial speech and an additional 10 treatment days for generalization to other settings as individuals. Based on a rule of thumb in operating behavior modification programs, it was felt this should be adequate time to observe if the intervention was having any effect. If no results were obtained in this length of time, it was revamped or dropped.

RESULTS

The results of the interventions were judged by the following criteria: 1) foremost, the intervention must be effective, meaning that the child spoke within a ±10% variation of peer speech in similar situations and continued to speak at this rate at 6-month follow-up; 2) it must be efficient by meeting the 10 treatment days standard for eliciting speech with the intervenor and 10 additional treatment days for generalization; 3) it required minimal disruption or restructuring of the environment.

I designed and managed the interventions of all 122 children. 32 interventions were implemented by project trainees whom I supervised, while I served as therapist in the other 90 cases.

Positive Reinforcement (BM+)

All three variations were notoriously unsuccessful. Only 2 of 17 children responded to the interventions within the 10-day period and both these children were symbiotics displaying a mild mutism problem.

The programs were repeatedly overhauled. Even the two successful instances required a combination of reinforcing the child and the class. Of equal concern was the generally disruptive nature of these programs. All programs caused considerable rearrangement of classroom procedures and cooperation and patience of both teacher and classmates. Consequently, success of the method depended not only on the child's effort but that of several others, all quite capable of creating a failure situation. Moreover, the program put emphasis, all day long in a few instances, on the child's mute behavior. Considering the generally controlling, manipulative nature of elective mutism, so much attention for the behavior appeared quite inspiring to several of the children.

This method also required a considerable amount of bookkeeping to which teachers or other major intervenors objected. Some of the programs, including the two successful ones were quite complicated such that those individuals not intimately involved such as substitute teachers or support personnel had problems when their involvement was necessary.

Because of the drawbacks, this method was deemed unsatisfactory and dropped as a major intervention after seventeen cases. However, it is important to note that this method served as a very useful backup netted to the others. While not satisfactory in eliciting speech or even initial generalizing, it was helpful in increasing the amount of speech or variety in situations once generalization had started. In these instances the method could be greatly simplified and quite unobtrusive while providing a vital aid in helping the child readjust to the speaking world.

Negative Reinforcement (BM-)

This method had the appearance of being more successful. In the 7 cases where it was used, 3 children responded but there were several problems with this method, many of them ethical. A major problem was that this method was merely direct confrontation of the power struggle and to avoid severely tripping the scales in the child's favor, the intervenor had to be assured he would win. He was up against a formidable situation. In applying the "good-bye" formula as an intervention, one 5-year-old remained in her chair at school until 7:30 p.m. when the teacher finally gave up. Moreover, because of the high rate of child abuse with these children, often connected with their mutism, one must realize from the start many have already borne brutal beatings, burns or sexual abuse and not talked. Outwaiting a teacher is small potatoes.

Of even more concern is the ethical issue. Is this method going to endear a child to speaking? Especially to speaking with the person engineering the program? Is this method any more justifiable than trying to beat speech out of him? And last, mutism, despite its saliency, appears on most counts to be a symptom rather than a problem in itself and the true problem remains quite speculative. Obviously a child willing to engage in this high cost behavior at the expense of positive adult and peer relationships has a very real reason for doing it. Removing the behavior by sheer dominance may be more harmful than good.

Finally, this method did not produce consistent results. The child would speak to be removed from the situation, but the same pressure had to be exerted again and again before

the child would speak reliably. By then the child has usually developed a negative relationship with the intervenor and a second intervenor was needed to continue program.

Aside from these notable difficulties, this method met more of the other criteria than did BM+. Few overhauls were needed and the results did more often appear within the 10-day period, although generalization was erratic a second intervenor were not introduced. The method required one concentrated period of environmental restructure, including an intervenor and/or teacher willing to give up spare time and very cooperative parents. Because this appeared to be a one-time situation and most of the individuals involved were desperate, more persons were willing to cooperate with this method than the positive one.

Because of the drawbacks, particularly the ethical ones, this method was deemed unacceptable except for unusual situations. The only instances this method appeared reasonable were in the cases of extremely low IQ and/or prepsychotic children, particularly those displaying thought disorder or fragmentary thinking. These children when placed in an extremely structured situation and presented with a negative stimulus such as a wet washcloth as an alternative to speaking, responded, whereas all other methods had proved unsuccessful. They did not lose rapport with the intervenor and responded quite consistently after the initial encounter.

Desensitization

This was tried with 15 children and was successful in 8 cases, primarily speech phobics and reactives. The major handicaps with this method were the length of time and the restructuring of the environment it required. With the speech phobics and reactives involved, it was felt that this method would have been successful given more time. However, the passive aggressive mutes appeared to consistently view this method as a combination of trickery and stupidity. Wary of getting tricked out of their defense, they staunchly refused to cooperate after the first few levels. Or as in 1 case of an 11-year-old boy, he become so disgusted with the intervenor's persistence to mimic her mouth movements that he finally told her how dumb she looked. Also, this method, particularly the first variation, required extensive restructuring and cooperation of a number of individuals. It seemed that this method would be more suitable to a clinical setting or elsewhere where such arrangements are more maneuverable.

However, like the positive behavioral approach, this method, particularly the mouthing-whispering hierarchy and the relaxation exercises, was an excellent backup tool. Once the child had established initial speech, it was sometimes easier to practice for generalization through the mouthing hierarchy. Particularly with the speech phobic, the child found starting conversations with new people was best facilitated through the hierarchy until he had gained confidence that his speech would not create disaster.

One to One Method

This method is one of those things that from all practical appearances shouldn't work. The child holds all the trump cards, but as anticlimatical as the approach seems, it was tremendously successful. 47% of the children answered the first question the intervenor asked. Used with 109 children, only one 5-year-old boy did not speak within the 10-day minimum. Since the other methods had already been used with this boy, this intervention was continued and he did speak on the twelfth day. Generalizing followed without too much direct intervention. As soon as it became apparent that the child was responding reliably to the intervenor, often in the first session, efforts were made to generalize. Among these efforts were changing location, such as walking around the building while talking; introducing other individuals such as teacher, principal or peers; having the teacher inform classmates that the child is going to be talking and not to react unusually; and directly suggesting to the child that

it is time to start talking in class. Only 4 children of the 109 required active intervenor participation in another environment to start talking. The remaining 105 children initiated speech on their own. All children generalized within the 10-day period, except again, for the aforementioned 5-year-old boy who unfortunately took the better part of 4 months to generalize to all situations, consequently, this method met the widest number of criteria, it is uncomplicated; it required only a minimal amount of equipment. Virtually no environmental restructuring was necessary except the few moments a teacher or aide may come into the session. The intervention is adaptable to use in the major environments where the mutism is displayed, although it has been successfully used in clinical settings. Lastly, it is efficient.

The only notable drawback is that the intervenor must have the presence to evoke the certainty and confidence in success this intervention requires. Related but lesser drawbacks noted included a greater resistance when the intervenor switched from another method to this one and resistance when the intervenor was the child's teacher. The fact that the intervenor and child had already established a mute relationship appeared to hinder forming a non-mute one although it was possible. However, the intervenor had to appear even more confident and persistent over a longer period of time. The teacher seemed to be in a double bind, especially in the case of the symbiotics and passive aggressives in that not only had he formed a mute relationship with the child but also represented another authority figure. Results indicate that the teacher is probably not a suitable intervenor in most cases.

Table 2
Long Term Effectiveness of Successful Interventions

Follow-up Time

#Maintained Success / #Successful Treatment	4 weeks N = 116	8 weeks N = 110	6 months N = 102	1 year N = 82	3 years N = 36	6 years N = 8
BM + N = 2	2 / 2	2 / 2	1 / 2a	2 / 2	2 / 2	1 / 1
BM- N = 3	2 / 3b	1 / 3b	3 / 3	3 / 3	3 / 3	2 / 2
D N = 7	7 / 7	7 / 7	6 / 6	5 / 5	3 / 3	1 / 1
1 / 1 N = 104	104 / 104	98 / 98	91 / 91	81 / 82c	28 / 28	4 / 4

a. Symbiotic mute spontaneously reverted to mutism during period of severe family turmoil and abuse, restarted with reinstated BM+ program.
b. Child(ren) speaking below 10% peer norm, BM- methods still occasionally used.
c. Passive-aggressive mute spontaneously reverted to mutism, institutionalized for other antisocial behaviors, committed suicide.

Table 3
Effectiveness of Intervention by Classification of Elective Mutism

# Successful / # Tried	S N = 72	SP N = 8	R N = 18	PA N = 24
BM+	2 / 7	0 / 2	0 / 4	0 / 4
BM-	2 / 4	0 / 0	1 / 2	0 / 1
D	2 / 6	4 / 5	2 / 3	0 / 1
1 / 1	54 / 55	1 / 1	9 / 9	18 / 18

DISCUSSION

3 major items need to be noted in light of the interventions used in this study. First, elective mutism in all 4 forms is an attempt on the part of the child to control his environment. Because of this effort from the child any intervention can easily become a power struggle that the intervenor is nearly always going to lose. With an abuse rate over 75%, these children are quite capable to sit out a 30-minute session or for that matter, a much longer wait and emerge still mute. The object clearly is not to challenge the child. Unfortunately this is difficult to avoid and even successful interventions such as the 1/1 fail quickly when the intervenor becomes frustrated, angry or punitive. Although many of these feelings are natural, when the intervenor finds himself feeling this way frequently in dealing with the child or expressing these feelings to the child in one manner or another, it is better to have someone else treat the child or stay with the behavior modification approach which allows a more impersonal interaction.

Second, most of us have been trained in the value of the patient - therapist relationship. Consequently, it seems natural to allow time for the child to acclimate to the therapist and the therapeutic environment. However, in the case of elective mutism, this appears counter productive. The child and intervenor develop a mute relationship first and then must overcome this. While not specifically addressed in the study, evidence indicated a more rapid change to speech in those iinstances when there was no prior relationship.

Last, speech was de-emphasized in the 1/1 method such that a child never received reinforcement for talking. Content of speech was acknowledged and reinforced as is done in most social situations but the mere act of talking was not. This appeared integral in that a number of children acknowledged in followup that their initial concern in restarting speech was the reaction to their saying something. Also a small number responded to the positive reinforcement of their teachers or peers by stopping speech and telling the intervener later that they found the reaction embarrassing or irritating. Simply because speech is a normal human behavior and not engaging in it is attention-getting, it appears reasonable to assume reinforcement is going to point out the attention getting factors.

Finally, re-examination of an arbitrarily-set criteria in the study needs to be made. In essence the 1/1 method was successful for all children involved although the child failed to meet the 10-day limit. Inclusion of a time limit as a criterion of successful intervention has occasionally been questioned and further, the other two interventions, behavior modification and desensitization, might have been more successful without the time restriction. This may be true and deserves the questions it has received. Already stated in the body of this study are my reasons for such arbitrary criteria. However, as the work progressed, a more salient factor seemed apparent. These interventions, all 3 of them, are at best “band-aid” therapies which eliminate the highly visible presenting symptom but do not address the reason these children engaged in this high cost behavior. With the methods currently available in psychiatry today, it is imperative that the child willingly and openly communicate with the therapist. Time lost in symptom treatment is time lost, period. The only insights which can come during that time are speculative at best. Most of the children in this study, especially those in the 1/1 method, became highly verbal with the intervenor and have developed a useful and open rapport which have, in turn, led to a better understanding of the underlying problem. While successful treatment of the mute behavior is paramount, it should not become an end in itself, but rather a means for more carefully examining the factors which would produce such a self-destructive behavior.

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