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## Changing Knowledge and Attitudes with a Middle School Mental Health Education Curriculum

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### Abstract

**Purpose**—This research tested the effectiveness of a widely used mental health education curriculum in changing knowledge and attitudes about mental illness.

**Method**—Middle school students from four schools were provided the *Breaking the Silence: Teaching the Next Generation About Mental Illness* mental health instruction while students from other classes at the same schools received usual class instruction. Students completed questionnaires assessing knowledge, attitudes, and social distance preferences before, immediately after, and six weeks after the instruction was given.

**Results**—Students given the *Breaking the Silence* instruction showed improvements in knowledge about mental illness, attitudes toward mental illness, and willingness to interact with people with mental illnesses. Students in the comparison classes showed no changes.

**Conclusions**—*Breaking the Silence* was an effective means of improving the knowledge and attitudes of middle school students about mental illness.

**Implications**—An easy-to-administer and effective curriculum, *Breaking the Silence* is available to teachers and schools to help improve understanding and acceptance of people with mental illness. Such a curriculum, introduced during childhood and adolescence, may help to prevent the negative attitudes and misunderstanding that characterize adult perceptions of mental illness.

### Keywords

*Breaking the Silence* curriculum; mental health education; program effectiveness; stigma reduction; student attitudes

### Introduction

It is widely recognized that, as former U. S. Surgeon General David Satcher, has observed, *stigma tragically deprives people of their dignity and interferes with their full participation in society* (U. S. Department of Health and Human Services, 1999b, p. viii). Decades of research has established that the public holds inaccurate negative beliefs about those with mental illnesses, seeing them as dangerous, unpredictable, unattractive, unworthy, and unlikely ever to be productive members of their communities (Nunnally, 1961; Rabkin, 1974; Farina, 1982; Fink & Tasman, 1991). Moreover, these negative perceptions have been remarkably constant despite advances in scientific understanding of mental illness and

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extensive efforts to improve public understanding and acceptance (Link, Phelan, Bresnahan, Stueve & Pescosolido, 1999; Phelan, Link, Stueve & Pescosolido, 2000).

The pervasive negative public beliefs about mental illness, in turn, create an environment that impedes both treatment seeking and recovery. It is estimated that only about one-third of the 44 million adults with diagnosable mental disorders seeks treatment from an appropriate mental health professional, and stigma is one major reason cited for this lack of treatment (U. S. Department of Health and Human Services, 1999a). Similar underutilization of mental health services has been noted for children (U. S. Department of Health and Human Services, 1999a; U. S. Public Health Service, 2000). Even when proper treatment is sought, however, stigma remains a barrier to recovery, leading to discrimination, discouragement, isolation, and damage to self-esteem (Olshansky, Grob & Malamud, 1958; Farina & Felner, 1973; Page, 1977; Fink & Tasman, 1991; Link, Cullen, Mirotnik & Struening, 1992; Wahl 1999a,b; Corrigan, 2004; Thornicroft, 2006). It is not surprising, then, that the Surgeon General identified stigma as one of the foremost obstacles to the treatment and recovery of people with mental illnesses (U. S. Department of Health and Human Services, 1999a) and that the President's New Freedom Commission Report lists among its recommendations a call to *advance and implement a national campaign to reduce the stigma of seeking care* (New Freedom Commission on Mental Health, 2003, p. 11).

### Children's Views of Mental Disorder

Few, if any, of those concerned with the problem of mental illness stigma would argue that the documented negative attitudes toward mental illnesses emerge full-blown in adulthood. Rather, it seems more likely that these ideas and attitudes are acquired gradually over a lifetime and that their roots are established in childhood. Indeed, Scheff (1999) has suggested that these attitudes are fairly well set by early childhood, a view supported by Wahl's (2002) review of the literature on children's perceptions of mental illness.

Moreover, children also face the stigma of psychiatric labels. For psychiatrically labeled children and adolescents acutely attuned to the judgments of their peers, misunderstandings and negative attitudes about mental illnesses among those peers may be particularly painful. Ostracism, rejection, bullying, and damage to self-esteem, as well as reluctance to seek or accept mental health treatment, are among the possible consequences (Crocker & Major, 1989, 2003; Milich & McAninch, 1992).

### Child Education as a means to Prevent Stigma

It is recognized that children are our next generation of responders to people with psychiatric disorders and that it may be easier to prevent negative attitudes from crystallizing than to change them once they have become firmly entrenched. By educating children about mental illnesses before their conceptualizations about mental health problems are fully formed, we may be able to prevent the formation of negative attitudes and to foster more accurate understanding and greater acceptance of people with psychiatric disorders. Not surprisingly, then, recent efforts to reduce stigma and discrimination surrounding mental illness, such as those of the World Psychiatric Association (Sartorius & Schulze, 2005), have commonly included efforts to educate children about mental illness.

### Breaking the Silence as a Means to Improve Knowledge and Attitudes

One widely used approach to child education is a curriculum called *Breaking the Silence: Teaching the Next Generation About Mental Illness*. This program is the result of the efforts of veteran teachers who are also parents of individuals with a mental illness. It is a group of teaching packages which includes lesson plans, games, stories, poems, and posters on serious mental illnesses for three broad grade levels—upper elementary, middle, and high

school. Through the teacher-led curriculum, students learn the warning signs of major mental illnesses, learn that mental illness can be treated successfully, and learn how to recognize and combat stigma. More details about the curriculum are provided in Appendix A. The *Breaking the Silence* program has been in use for over 10 years and more than 3,200 middle schools in the US and several other countries have received the *Breaking the Silence* lesson plans.

Curriculum packets include a teacher rating form, and preliminary analyses of these forms indicate that teachers tend to be very pleased with the program. Examination of responses from 72 teachers using the curriculum found that the mean rating of effectiveness of materials in dispelling myths and stereotypes of mental illness was 4.44 on a 5-point scale (Wood & Wahl, 2002). The mean rating of effectiveness in educating students about serious mental illness was similarly high—4.37. In addition, 94% of the teachers who had used the program indicated that they intended to use the materials again. The specific components of the curriculum received high marks, as well. Almost all components were rated as ‘useful’, with mean scores above four on the 5-point scale. Overall, then, results suggest that the *Breaking the Silence* curriculum was positively appraised by the educators who used it.

These positive appraisals, however, do not establish the effectiveness of the curriculum in changing knowledge and attitudes about mental illnesses. While teachers believe that the curriculum accomplishes its goals in this regard, there has been no systematic, empirical confirmation of changes in student knowledge or attitudes. With the *Breaking the Silence* program, as with other mental health education programs, it is important that we assess the extent to which it does or does not meet its goals. Does the *Breaking the Silence* program change knowledge and attitudes about mental illnesses? The current study addressed this question.

## Method

### Measures

To assess the knowledge and attitudes of students toward mental illnesses, three main measures were constructed, with special attention to their utility for middle school students who were the target of the study. These measures were developed using identified messages in the *Breaking the Silence* curriculum, feedback from an Advisory Board of teachers and researchers, and a pilot study to establish psychometric properties and refine items. The Knowledge measure consisted of 17 factual statements about mental illness (e.g., *People with mental illness tend to be violent and dangerous.*), to which respondents were asked to indicate their degree of agreement, on a 5-point Likert-type scale from ‘strongly disagree’ to ‘strongly agree’. The Attitude measure involved 17 opinion statements (e.g., *I have little in common with people who have mental illness.*), also rated on a 5-point Likert-type scale of agreement/disagreement. The items for Knowledge and Attitudes were randomly interspersed in a single questionnaire for ease of student completion. In addition, reverse items were included in each scale such that correct knowledge or positive attitudes would be reflected by disagreement with the statement.

The third major instrument was a modified version of the Social distance scale in which respondents indicate their degree of willingness to interact with a person with a mental illness in specific social situations. Items were modified from standard Social distance measures (Link, Yang, Phelan & Collins, 2004) to better fit the lives of middle school students. For example, instead of asking about willingness to work on a job with someone with a mental illness, students were asked about their willingness to work on a class project with someone with a mental illness. There were eight items, rated on a 5-point Likert-type scale from ‘definitely unwilling’ to ‘definitely willing’.

Test–retest reliability of the measures was examined as part of the pilot study. Test–retest correlations for overall Knowledge, Attitudes, and Social distance measures were 0.67, 0.85, and 0.86, respectively. As noted above, items were modified slightly based on pilot results. Therefore, we also calculated test–retest reliabilities for our final study sample using the scores of the 87 comparison subjects at first and second testing. Those correlations were 0.49, 0.74, and 0.89 for Knowledge, Attitudes, and Social distance, respectively.

## Participants

As noted, middle school students were chosen as the participants in this study, although *Breaking the Silence* curriculum packets are available for students in elementary school and high school as well. The choice of middle school students was largely a practical one. We wanted to reach students at a young age but we were uncertain of our ability to develop attitude and knowledge measurement instruments that were suited for elementary age students with more limited reading and comprehension abilities. In addition, the middle school years are a time of important cognitive and emotional development, as well as a time of maturational and mental health challenges, and thus the selected age group seemed particularly appropriate for education about mental illnesses. Student participants came from four middle schools in different parts of the US—Columbia, South Carolina, Port Washington, New York, Cooper City, Florida, and Albuquerque, New Mexico. These schools were ones which had previously expressed interest in the *Breaking the Silence* program and who agreed to participate in the program after being contacted by the co-investigators from the National Alliance on Mental Illness, Queens/Nassau. We deliberately sought schools from different locations so as to have a diversity of backgrounds represented among our student sample. Students were in 7th and 8th grade science or health and physical education classes.

The research was reviewed and approved by the University of Hartford Human Subjects Committee, by the principals of each school, and, for the Florida school, by the Broward County Research Services Board.

## Procedure

Two sets of classes from each school were identified for participation in the research. All classes were administered the study questionnaires. One class (designated the *Breaking the Silence* class) at each school received three class sessions of *Breaking the Silence* instruction during a single week while the other class (designated the comparison group) received their regular instruction, which did not include mental health information. When *Breaking the Silence* instruction was completed, both sets of classes filled out the study questionnaires a second time; thus, the first two testing sessions were one week apart. Finally, approximately six weeks after *Breaking the Silence* instruction was completed, both sets of classes completed the study questionnaires a third time. Parental consent and student assent was required for participation for each questionnaire session. Only students who completed all three sessions of questionnaires were included in study results.

For *Breaking the Silence* instruction, teachers were asked to include six specific components of the curriculum. These are the components which the developers of the curriculum (who were also co-investigators in this study) believe are central and which previous teacher feedback indicated were the most often selected by teachers for use (Wood & Wahl, 2002). The components used by teachers for *Breaking the Silence* instruction are described in Appendix A. Teachers were also asked to cover *Breaking the Silence* materials in a minimum of three 45–50 minute classes. We asked teachers to verify the dates and duration of *Breaking the Silence* instruction and the components used. All teachers taught three

sessions within a one-week period. All teachers used all the specified components except for one who reported that time did not permit use of one component (*The Brain Game*).

Knowledge items were scored 1–5, corresponding to agreement ratings on the Likert-type scale, with items scored so that higher scores represented more accurate knowledge. The scores on the 17 Knowledge items were then summed to produce an overall Knowledge score, again with higher scores indicating more accurate knowledge. Attitude items were scored similarly, with higher scores indicating more positive attitudes and summed scores providing an overall Attitudes score. Social distance items were also scored 1–5, with higher scores indicating greater acceptance of persons with mental illness and scores summed to produce an overall Social distance score. The three overall scores served as the basis for repeated measures analysis of variance to test the impact of the *Breaking the Silence* instruction.

## Results

### Hypotheses

If *Breaking the Silence* is effective in improving knowledge and attitudes about mental illnesses, there would be improvements in the overall scores for the *Breaking the Silence* group and little or no change for the comparison group. In terms of the analyses of variance, it was hypothesized that there would be significant interaction effects between time of questionnaire administration (pre-, post-, and follow-up) and instructional group, with the *Breaking the Silence* group showing greater change.

### Participants

Not all students who completed questionnaires on the first occasion also completed them in subsequent sessions, because of both absences and lack of signed parental consent for one or more sessions. Altogether, 193 students completed all three sets of questionnaires, 87 for the comparison condition and 106 for the *Breaking the Silence* condition. This represents 47% of the 409 eligible students at the four schools. Table 1 shows the demographic characteristics of this sample. There were roughly equal numbers of males (47%) and females (53%) in the overall sample, although there was some difference in the gender representation between the comparison group (60% female) and the *Breaking the Silence* group (48% female). Mean age of participants was 12.5 years, consistent with their 7th and 8th grade status. Sampling from different schools appeared successful in providing a broad ethnic and racial mix—45% Caucasian, 21% African-American, 19% Hispanic/Latino, and 5% mixed race.

### Overall Scores

Table 2 summarizes the overall mean scores for Knowledge, Attitudes, and Social distance and the interaction effect of the repeated-measures analysis of variance for each. All three measures produced statistically significant interaction effects. As is apparent from Table 2, the *Breaking the Silence* and comparison students differed little at the start of the study, but students receiving the *Breaking the Silence* instruction showed better knowledge, more positive attitudes, and greater social acceptance after the instruction while comparison students showed no change. Moreover, improvements for the *Breaking the Silence* group were sustained through the six-week follow-up period. Although Knowledge and Attitude scores dipped from immediate post-test scores, *Breaking the Silence* scores remained higher than baseline scores and higher than scores of the comparison group.

The impact of the *Breaking the Silence* curriculum was also consistent across gender, school, and racial/ethnic background. There were no significant interaction effects for the

*Breaking the Silence* instruction and gender, school, or race/ethnicity. Improved Knowledge, Attitudes, and Social distance preferences occurred with *Breaking the Silence* instruction for both males and females, in all four study schools, and regardless of ethnic/racial background.

### Individual Items

It is also useful to look at the distribution of responses to individual items on our measures to see more clearly what changes occurred—and also where change was not as great as might be desired. Tables 3–5 show the percentages of *Breaking the Silence* students agreeing (or, with reverse items, disagreeing) with specific items on each of our measures before and immediately after instruction.

Table 3 shows the pre- to post- changes in agreement and disagreement with Knowledge items for student receiving *Breaking the Silence* instruction. The greatest gain in Knowledge was for the statement, *People who have had mental illness include astronauts, presidents, and famous baseball players*. Only 39% of respondents in the *Breaking the Silence* group agreed (combining ‘agree’ and ‘strongly agree’ responses) with this statement prior to instruction, whereas 90% agreed immediately after *Breaking the Silence* instruction. There was also a substantial increase in Knowledge concerning medical treatment of mental illnesses. The number of respondents who agreed that, *Giving medicine is a useful way to treat mental illness* went from 40% prior to instruction to 77% after receiving the *Breaking the Silence* curriculum. Knowledge about symptoms of specific disorders increased as well. Before instruction, only 6% of students disagreed with the statement, *Schizophrenia is a mental illness that involves multiple personalities*. After instruction, 42% disagreed. Before instruction, only 26% agreed that, *A person with bipolar (manic depressive) disorder acts overly energetic*. After instruction, more than half (59%) agreed. Before instruction, only 34% disagreed that, *Mental retardation and mental illness are the same things*. After instruction, the percentage of students disagreeing rose to 59%. Pre- and post- mean scores were significantly different for each of the above items.

At the same time, there were other items that showed limited (and non-significant) change. For example, over 80% of students disagreed, both before and after instruction, that, *Psycho and maniac are okay terms for mental illness*. More noteworthy is the lingering belief that people with mental illnesses may be dishonest. Fewer than half of the respondents disagreed with the statement, *People with mental illness are more likely to lie than other people* both before (44%) and after (43%) *Breaking the Silence* instruction.

Table 4 shows the pre- to post- changes in agreement and disagreement with Attitude items for students receiving the *Breaking the Silence* instruction. Most of these items changed in a positive direction, leading to a cumulative significant change in overall Attitude score, but only a few individual items showed large changes. Two items that produced statistically significant mean changes had to do with special educational requirements for students with mental illnesses. Before instruction, 42% of students disagreed that, *Students with mental illness should not be in regular classrooms*. After instruction, a greater percentage (57%) disagreed with this statement. Only 8% of students disagreed with the statement, *Students with mental illness need special programs to learn in school* prior to instruction. After instruction, 24% disagreed. Another item producing a significant mean change concerned comfort with a person with a mental illness. Although most students (68%) indicated even before instruction that they *would be comfortable meeting a person with a mental illness*, more (85%) agreed after instruction.

Table 5 shows the pre- to post- changes in Social distance preferences for students receiving the *Breaking the Silence* instruction. All items showed small improvements, adding to a

significant overall Social distance score change. Statistically significant change was apparent for only two items. There was an increased willingness of *Breaking the Silence* students to have someone with a mental illness as a neighbor (59% willing or very willing before instruction and 71% after). There was also an increased willingness to go on a date with someone with a mental illness, although, overall, the willingness remained low (15% before and 25% after).

### Teacher Evaluations

Teachers who completed the *Breaking the Silence* instruction filled out an evaluation form that is part of curriculum materials. This form asks teachers to rate each component in terms of its perceived usefulness on a 5-point scale from 'not useful' to 'very useful'. Most components of the curriculum were given the highest rating (5) by most teachers. The main exception to this was the *Famous People Word Search*, which one of the teachers rated as 3 and another as 2. All teachers also rated the curriculum's perceived effectiveness in educating students about serious mental illness and in dispelling myths about mental illness, on a 5-point scale from 'not at all' to 'very effective'. All four teachers gave ratings of four or five to both items and all indicated that they would use the curriculum again.

### Discussion

Results indicated that the *Breaking the Silence* curriculum was effective in improving knowledge and attitudes about mental illnesses among middle school students. Following *Breaking the Silence* instruction, students showed more accurate understanding of the symptoms and treatments of mental illnesses, more accepting attitudes about mental illnesses, and greater willingness to interact with a person with a mental illness. As no such improvements occurred for students who did not receive the *Breaking the Silence* instruction, it is appropriate to conclude that it was the specific instruction that led to the improvements. In addition, improvements from *Breaking the Silence* instruction were sustained through a six-week follow-up period, suggesting that the program produces lasting learning and attitude change. Results, then, confirm that *Breaking the Silence* is an effective approach to teaching children about mental illnesses and building greater acceptance and understanding about psychiatric disorders. These results are particularly noteworthy in that the identified improvements occurred with a relatively small investment of time—only three class sessions and about 2.5 hours of class time. It is possible that even greater change could be induced with more sustained coverage of *Breaking the Silence* topics. Moreover, as in the usual delivery of *Breaking the Silence* instruction, teachers received little guidance other than what is in the curriculum materials. The curriculum did not have to be delivered by outside experts or involve guest speakers or require specific training of teachers. Thus, *Breaking the Silence* appears to be a simple and cost-effective way to improve the knowledge and attitudes of students about mental illness.

As noted earlier, this is a very important outcome. The ability to improve knowledge and attitudes about mental illness among the next generation of citizens is essential to reducing future discrimination and stigma. It may also help youth with a mental illness to be more understood and accepted by their peers, as well as enable greater self-understanding and acceptance. As noted previously, there is a need for empirical validation of the approaches that have been developed to produce these outcomes. Results of this study provide such validation for one program, *Breaking the Silence*, thereby increasing the arsenal of empirically supported tools for combating misunderstanding of mental illnesses and the damaging consequences of such misunderstanding.

Consideration of individual items showed that the *Breaking the Silence* instruction was more successful in producing change for some items and less successful for others. Some item

change can be directly connected to curriculum components. For example, greater understanding of the specific symptoms of schizophrenia and bipolar disorder undoubtedly reflects the inclusion of definitions of those disorders in the curriculum (in *Use the Right Words*, among other places). Similarly, the greatly increased recognition that many famous people have had mental illness likely reflects the fact that the *Word Search* exercise required finding the names of famous people who have had a mental illness and a matching of famous people with their illnesses. It is also noteworthy that significant change appeared despite the fact that two of the four *Breaking the Silence* instructors judged the *Word Search* component to be less useful than other components. Such an outcome underscores the importance of empirical assessment of effects rather than reliance on teacher impressions of usefulness of components.

At the same time, other items may have shown less change because they were not as explicitly covered in the *Breaking the Silence* curriculum (e.g., the honesty of people with mental illnesses, or the lack of relationship of mental illnesses and violence). Still other items likely showed no change because they already were highly positive before the *Breaking the Silence* instruction and, therefore, had limited room for change (e.g., the unacceptable nature of slang terms for mental illnesses, or the need to do more to help those with mental illnesses).

Results also indicate specific aspects of knowledge and attitudes where improvement—or further improvement—is still necessary. For example, while the confusion of multiple personality with schizophrenia was significantly reduced following *Breaking the Silence* instruction, less than half of the students were clear that those two conditions were not the same. Similarly, significant improvement in knowledge did not produce a majority who understood that mental illnesses can have physical causes or who disagreed with the idea that people with a severe mental illness do not get better. More than one third of the students believed or were uncertain whether people with a mental illness tend to be violent and dangerous. Despite improvements, less than half of the students disagreed that they had little in common with people with mental illnesses or that it would be embarrassing to have a mental illness. Barely half contradicted the idea that only weak and overly sensitive people let a mental illness affect them.

The need for greater improvement was particularly evident in Social Distance ratings. Even after *Breaking the Silence* instruction, only about half of the students indicated they would be willing to invite someone with a mental illness to their home, or work on a class project with someone with a mental illness. Only one in four students indicated they would be willing to go on a date with someone with a mental illness.

These results may reflect relative weaknesses in the *Breaking the Silence* curriculum in terms of how much, or how explicitly some of these ideas were addressed. They may also reflect the fact that some ideas and attitudes are more entrenched and, thus, more difficult to modify. The idea that schizophrenia and multiple personality are the same receives persistent and powerful reinforcement in films and other media, as does the idea that people with mental illnesses are violent and dangerous (Wahl, 1995). It may be more difficult to change such pervasively supported beliefs than to fill gaps in knowledge (e.g., about famous people with mental illnesses). Most educational interventions would face the same limitation. Social Distance results reflect a well-documented phenomenon that interaction willingness diminishes as the hypothetical contact becomes more intimate. Students may be willing to encounter someone with a mental illness in a variety of contexts—and may be persuaded to increase their willingness—but most remain unwilling to commit to an ongoing, close personal relationship such as dating. The apparent unwillingness to date someone with a mental illness, even after *Breaking the Silence* instruction, may not reflect a



weakness in the curriculum as much it does the potency of the resistance to close interaction with people who have mental illnesses.

Nevertheless, these areas where change did not occur, or where ideas and attitudes remained more negative than desired, may warrant some modification of the *Breaking the Silence* instruction. It may be useful to consider modification of current curriculum elements or addition of new ones to more directly or more powerfully address some of the ideas where greater change is desired.

There are, of course, some limitations to these results. Monitoring of fidelity of instruction to the *Breaking the Silence* curriculum was limited to asking teachers to confirm use of specified components over a specified number of class sessions. How—or how well—teachers carried out specified components is unknown. However, this uncertainty is characteristic of the way *Breaking the Silence* education is intended to be delivered—by teachers, in their own manner, following written materials, without outside assistance. The omission of fidelity checks is, therefore, consistent with the intent of the study to assess the effectiveness of the *Breaking the Silence* program as it is typically delivered. In this regard, an opposite limitation of the study is that it put atypical restrictions on teachers, specifying the components to be used and the number of class periods and time frame over which the curriculum would be delivered. While such restrictions are not part of the typical *Breaking the Silence* delivery, prior data from teachers indicate that the components and time periods are similar to what teachers have used in their classrooms.

It is also the case that test–retest reliability was somewhat low for the overall Knowledge score. Such modest reliability is not altogether surprising given the likelihood of specific gaps in knowledge (as opposed to an overall lack of knowledge). Gaps in knowledge lead to uncertainty in response, and uncertainty may have led to greater variation in response from one occasion to the next. Nevertheless, the lower reliability for the Knowledge score warrants caution in interpretation of results from this measure.

Identified improvements, and differences from the students in comparison classes, remained through the six-week follow-up. While this suggests more than an ephemeral impact on knowledge and attitudes, six weeks is still a relatively small amount of time. It would be useful to know whether the observed knowledge and attitude improvements are sustained for a longer period. Additional research would be needed to address this question.

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## Appendix A

### The *Breaking the Silence* Middle School Curriculum<sup>a</sup>

The following are the components of the *Breaking the Silence* curriculum for middle school students that teachers were asked to use in their instruction. There are also other components that can be used by teachers—e.g., discussion of stigma and the media, student creation of posters related to mental illness, or presentation of recommended videos. However, the researchers (two of whom are the developers of the *Breaking the Silence* program) believe that the required six components are the core ones of the curriculum. In addition, an earlier analysis of teacher reports of what components had been utilized by them confirmed that components 1, 2, and 4 are the most widely used parts of the curriculum (Wood & Wahl, 2002).

1. **A Lesson Plan:** *The Lesson Plan* has a number of components. It begins with a discussion of the term “mental illness” and the slang words associated with mental illness, along with suggested questions about how the student would feel if someone used the slang terms about them. This is followed by a story about a family’s struggle with their child’s emerging schizophrenia (*A Mother’s Day Gift*), which also serves as a basis for class discussion. Questions with which to begin discussion and message points to emphasize are provided. Among the points suggested are that neither the person nor the parents are to blame for mental illnesses, that mental illnesses are brain disorders, that mental illnesses are often mistaken for drug or alcohol abuse, that mental illnesses are treatable with medication and therapy, and that talking to a therapist can help. *The Lesson Plan* also includes a list of *warning signs of mental illness*.
2. **The Family Secret:** This section presents poems excerpted from a book, *Stop Pretending: What Happened When My Big Sister Went Crazy* (Sones, 1999). Suggested discussion questions are included as well, such as: *Why doesn’t the girl in the poem want to tell her friends what’s wrong with her sister? How would you act and feel if you were in the same situation.*
3. **Nothing to Sneeze At:** This is a story of a student with Obsessive–Compulsive Disorder. Suggested discussion questions focus on the symptoms of obsessive–compulsive disorder and the impact of those symptoms on the student’s life and on her family.
4. **Famous People with Mental Illness Word Search:** A word search puzzle is provided in which students are given the names of famous people who have or have had a mental illness to find within a letter grid provided. Answers are provided also, with indications of what form of mental illness each person experienced.
5. **The Brain Game:** This is a board game in which students earn “Stigma Buster” cards and progress to a goal by correctly answering questions related to mental illnesses. The game—and the questions and answers in it—call upon information provided through the lesson plan and thus may strengthen learning of this information.
6. **Use the Right Words:** This component provides the names, definitions, and descriptions of a variety of mental disorders as well as information about stigmatizing terms to avoid.

<sup>a</sup> Free copies of the full curricula for elementary schools, middle schools, and/or high schools may be obtained by contacting Amy Lax, NAMI Queens/Nassau, 1981 Marcus

Ave., Suite C-117, Lake Success, NY 11042, USA or by sending a request to [btslessonplans@aol.com](mailto:btslessonplans@aol.com).

**Table 1**

Demographics of the Student Samples Receiving the *Breaking the Silence* Instruction (n=106) and the Comparison Group (n=87)

Characteristic	<i>Breaking the Silence</i> % (n)	Comparison Group % (n)	Total % (n)
Gender			
• Female	48% (51)	60% (52)	53% (103)
• Male	52% (55)	40% (35)	47% (90)
Race/Ethnicity			
• Caucasian/White	42% (44)	49% (43)	45% (87)
• Black/African-American	22% (23)	20% (17)	21% (40)
• Hispanic/Latino	19% (20)	18% (16)	19% (36)
• Asian	8% (8)	5% (4)	6% (12)
• Mixed race	6% (6)	3% (3)	5% (9)
• American-Indian/Alaska Native	3% (3)	0% (0)	2% (3)
• Hawaiian/Pacific Islander	0% (0)	1% (1)	1% (1)
• Other	1% (1)	2% (2)	3% (3)
• Unknown	1% (1)	1% (1)	1% (2)
Mean age in years (standard deviation)	12.4 (0.6)	12.6 (0.6)	12.5 (0.6)

**Table 2**

Mean Scores and Results of Repeated-Measures ANOVA (n = 193 for All Scores)

	Pre-	Post-	Follow-up	F <sub>(2, 382)</sub> <sup>*</sup>
Knowledge <sup>†</sup>				
<i>Breaking the Silence</i>	58.9	64.8	62.6	34.6 p < 0.001
Comparison	60.5	60.0	60.1	
Attitudes <sup>†</sup>				
<i>Breaking the Silence</i>	63.8	65.5	64.6	4.6 p = 0.012
Comparison	63.1	62.3	63.1	
Social distance <sup>‡</sup>				
<i>Breaking the Silence</i>	27.5	28.8	29.4	4.5 p = 0.013
Comparison	27.2	26.8	27.0	

\* F values are for interaction effects of instructional condition (*Breaking the Silence* and Comparison) by time (pre-, post-, and follow-up).

† Possible range of scores = 17–85; higher scores indicate more accurate knowledge and more positive attitudes.

‡ Possible range of scores = 12–40; higher scores indicate greater willingness to interact with a person with mental illness.

**Table 3**

Percentages of *Breaking the Silence* Students Agreeing or Disagreeing with Knowledge Items (n = 106 for All Items)

Item	Pre- % (n)	Post- % (n)
People who have had mental illness include astronauts, presidents, and famous baseball players.	40% (42) A	77% (82) A
Giving medicine is a useful way to treat mental illness.	39% (41) A	88% (95) A
Schizophrenia is a mental illness that involves multiple personalities.	5% (6) D	42% (45) D
A person with bipolar (manic depressive) disorder acts overly energetic.	24% (26) A	59% (63) A
Mental retardation and mental illness are the same things.	34% (36) D	59% (63) D
Psychological therapy (e.g., talking to a psychologist or counselor) is a useful way to treat mental illness.	61% (63) A	83% (88) A
Most people with severe forms of mental illness do not get better, even with treatment.	17 (16%) D	37% (39) D
Mental illness is often confused with the effects of drug abuse.	32% (34) A	49% (52) A
People with mental illness are hurt when others use slang words for their disorders.	73% (78) A	85% (91) A
Mental illness is caused by something biological.	28% (30) A	40% (42) A
Mental illness is often shown in negative ways on TV and in movies.	66% (70) A	76% (81) A
People with mental illness tend to be violent and dangerous.	54% (57) D	64% (68) D
People with mental illness are often treated unfairly.	68% (72) A	76% (80) A
Parents are usually to blame for a child's mental illness.	66% (70) D	73% (77) D
"Psycho" and "maniac" are okay terms for mental illness.	84% (89) D	89% (94) D
People with mental illness are more likely to lie than other people.	44% (47) D	43% (46) D
Mental illness is <u>not</u> a very serious problem.	75% (80) D	72% (76) D

A = Agree + Strongly Agree; D = Disagree + Strongly Disagree (this is used for reverse items where disagreement with the statement indicated more accurate knowledge).

**Table 4**

Percentages of *Breaking the Silence* Students Agreeing or Disagreeing with Attitude Items (n=106 for All Items)

Item	Pre- % (n)	Post- % (n)
I would be comfortable meeting a person with a mental illness.	68% (72) A	85% (90) A
Students with mental illness need special programs to learn in school.	8 % () D	24% (25) D
Students with mental illness shouldn't be in regular classes.	42% (44) D	57% (60) D
I would be frightened if approached by a person with a mental illness.	64% (68) D	74% (78) D
I have little in common with people who have mental illness.	39% (41) D	47% (50) D
People with mental illness are able to help others.	68% (72) A	75% (80) A
It would be embarrassing to have a mental illness.	36% (38) D	41% (43) D
Only people who are weak and overly sensitive let mental illness affect them.	46% (49) D	51% (54) D
If any friends of mine had a mental illness, I would tell them NOT to tell anyone else.	54% (57) D	58% (61) D
Keeping people with mental illness in the hospital makes the community a safer place.	50% (53) D	54% (57) D
It is important to learn about mental illness.	90% (95) A	93% (98) A
We should do more to help people with mental illness get better.	97% (103) A	98% (104) A
Jokes about mental illness are hurtful.	91% (96) A	92% (98) A
A person with a mental illness is able to be a good friend.	84% (89) A	83% (88) A
People with mental illness deserve respect.	96% (102) A	95% (101) A
It is a good idea to avoid people who have mental illness.	88% (93) D	83% (88) D
If I had a mental illness, I would not tell any of my friends.	67% (71) D	58% (61) D

A = Agree + Strongly Agree; D = Disagree + Strongly Disagree (this is used for reverse items where disagreement with the statement indicated more positive attitudes).



**Table 5**

Percentage of *Breaking the Silence* Students Willing to Interact with a Person with Mental Illness (n = 106 for All Items)

Item	Pre- % (n)	Post- % (n)
Have someone with a mental illness as a neighbor.	59% (62)	71% (75)
Have someone with a mental illness in a class with me.	58% (62)	66% (70)
Sit next to someone with a mental illness.	53% (56)	60% (64)
Talk to someone with a mental illness.	75% (80)	78% (83)
Work on a class project with someone with a mental illness.	45% (48)	54% (57)
Makes friends with someone with a mental illness.	72% (76)	75% (80)
Invite someone with a mental illness to my home.	44% (47)	52% (55)
Go on a date with someone with someone with a mental illness.	15% (16)	25% (26)

Percentages indicate students responding “probably willing” or “definitely willing”.