Kimberly R. Hall *is an assistant professor in the Department of Counselor Education, Virginia Commonwealth University, Richmond. E-mail: krhall@vcu.edu*

Using Problem-Based Learning with Victims of Bullying Behavior

Victims of bullying need assistance in developing better strategies for effectively responding to bullies. Utilizing a new intervention strategy, problem-based learning (PBL), school counselors can incorporate problem-solving and literature-based lessons. This strategy provides the possibility of increasing awareness and knowledge of bullying, achieving teacher/parent involvement, and teaching assertiveness skills. A single-subject design was utilized to determine the effectiveness of PBL with five victims of bullying behavior. Results and implications for school counselors are discussed.

Acomprehensive school counseling program should support the academic mission of schools through fostering academic, career, and personal/social development of all students. Specific ongoing services provided by school counselors, such as individual/group counseling, crisis management, and suicide prevention, enable students to identify and work toward removing personal obstacles to learning (American School Counselor Association, 2003). One of the major obstacles that now affect numerous students is bullying. Approximately 36% of students have reported being victimized (Centers for Disease Control, 1998; Cleary, 2000) and almost one third of public schools have reported daily to weekly occurrences of student bullying (National Center for Education Statistics, 2002). Because bullying leads to fear and intimidation among students, the climates of schools have been dramatically altered. Victims of bullying behavior are significantly distressed by this behavior and exhibit signs of social withdrawal, school avoidance, stress-related problems, decline in academic performance, depression, and sometimes suicide (Austin & Joseph, 1996; Bond, Carlin, Thomas, Rubin, & Patton, 2002; Craig, 1998; Crick & Bigbee, 1998; Crick & Grotpeter, 1996; Hawker & Boulton, 2000; Rigby, 1996).

Studies also have shown that, in comparison to nontargeted children, targeted children are more likely to reward bullying by giving in, crying easily, failing to defend themselves, and, in general, responding passively and nonassertively (Hodges, Boivin, Vitaro, & Bukowski, 1999; Olweus, 1993; Perry, Williard, & Perry, 1990; Schwartz, Dodge, & Coie, 1993). The lack of self-confidence experienced by children who are frequent targets of bullying increases the likelihood that they will respond ineffectively unless they are provided with better strategies and the opportunity to practice them.

Much of the literature on bullying behavior in schools primarily focuses on school-wide implementation plans to reduce bullying. Many researchers and practitioners have suggested a variety of district-, building-, and classroom-level interventions (Coie, Underwood, & Lochman, 1991; Dubow, Huesmann, & Eron, 1987; Floyd, 1985; Goldstein, 1988; Goldstein & Glick, 1987; Goldstein, Sprafkin, Gershaw, & Klein, 1980; Greenbaum, 1987, 1988; Guetzloe, 1992; Hazler, Hoover, & Oliver, 1992; Olweus, 1991b). One comprehensive bully prevention program, Steps to Respect, includes literature-based lessons that fulfill both language arts and social and emotional learning objectives (Committee for Children, 2004). The program reinforces academics while simultaneously teaching students strategies for responding to bullying. These programs, however, must be implemented throughout the entire school. The problem is that many schools have not implemented or have been unsuccessful at implementing a school-wide bully prevention program. In these schools, students who are repeatedly bullied need assistance with responding appropriately to bullying behavior.

McFadden (1986) and Olweus (1991a) reported that a combination of intervention strategies could dramatically reduce the number of victims of bullying. Olweus suggested (a) increasing public awareness and knowledge of bullying, (b) achieving active teacher and parent involvement, and (c) developing sanctions against bullying behavior. McFadden additionally suggested the teaching of assertiveness skills to those who are victimized. Kochenderfer and Ladd (1997) found that when students use problem-solving strategies, bullying tends to end.

PROBLEM-BASED LEARNING

One intervention strategy that has not previously been utilized by counselors incorporates problem-solving and literature-based lessons. This strategy, problem-based learning (PBL), provides the possibility of increasing awareness and knowledge of bullying, achieving teacher and parent involvement, and teaching assertiveness skills. PBL encourages students to work together to uncover solutions to real problems (Barrows, 2000; Boud & Feletti, 1997; Neufeld & Barrows, 1974; Schmidt, 1993). Students work in small groups, individually research specific issues relevant to the identified problem, reconvene after a period of independent research, and then collaboratively discuss their research findings. PBL requires students to actively discuss and analyze problems, form hypotheses, and create personal learning issues. This process enables students to not only acquire and apply knowledge, but also to learn and practice communication skills that are critical to lifelong success (Mennin, Gordan, Majoor, & Osman, 2003; Wood, 2003).

Previous research has indicated that students involved with PBL report more satisfaction, less stress, and more encouragement in their learning environment when compared to students from traditional educational programs (Albanese & Mitchell, 1993; Vernon & Blake, 1993). Students also indicated that they studied more for understanding and meaning, used a broader variety of learning resources, and utilized the library for independent research. Finally, research has established that long-term recall is enhanced for students in a PBL curriculum (Albanese & Mitchell; Vernon & Blake).

Approximately 36% of students have reported being victimized and almost one third of public schools have reported daily to weekly occurrences of student bullying.

PURPOSE OF THIS STUDY

The current study was developed in response to a need at a rural junior high school in the Southern United States. The school had reported significant problems with bullying. A school-wide plan for bullying had been implemented but no intervention strategies specifically for the victims of bullies had been used. Because PBL had been shown to produce positive results in academic areas, the counselor utilized this methodology as a group counseling technique to teach assertiveness skills to victims of bullies. The purpose of this article is to describe the counselor's implementation of PBL with a group of seventh-graders who were the targets of bullying behavior.

METHODS

Participants
Five seventh-grade students, who were all identified by the school counselor as victims of bullies, participated in the study. All students were African American and enrolled in a large, rural junior high school in the Southern United States. The students, three boys and two girls, were 13 to 14 years old.

Measurement
Teachers completed an easy-to-use behavior observation form developed by the counselor (see Appendix A). On this form, teachers indicated how students responded when confronted by a bully or bullies. The form was completed twice a week and given to the school counselor.

Procedures
Planning for problem-based learning. In designing a group based on PBL, one must use a case that presents a real-world problem. Because PBL has not previously been applied to counseling, the counselor designed a case specific to seventh-grade students who were bullied. The objectives for the case and group counseling sessions were as follows:

1. Students will identify, apply, and practice strategies to reduce name calling and rumor spreading.
2. Students will identify, apply, and practice strategies to reduce physical violence.
3. Students will develop an action plan for victims of bullies.

The case then was developed by utilizing a real-world scenario and incorporating items from the objectives. The counselor composed the following case specific to bullying:

> John is frustrated and sad. Every day he comes to school, other students tease him. Some call him names, while others talk about him and spread rumors. One boy even pushes him and threatens to beat him up. He's tired of coming to school and wants to drop out.

After the case was written, the counselor then anticipated students' questions and hypotheses. Possible responses were predicted to ensure that confusing or unnecessary information was removed from the case and that questions posed would lead students to the stated objectives.

The group counseling sessions were structured according to an adapted PBL model: data identification, questions, hypotheses, key questions, and resources (Hall, 2004). The counselor devised and implemented the following sequence for five counseling sessions:

1. Students reviewed the case and identified facts from the case. They developed open-ended ques-

tions for each fact and then formed hypotheses for each question.

2. Students reviewed the case, including facts, questions, and previous hypotheses. They developed three key questions that they wanted to research and answer. Students identified resources to help them answer these key questions. They utilized resources to answer key questions as homework.

3. Students discussed findings in the group. They practiced skills that were identified in the resources. Students continued to research questions, using new resources identified in the group.

4. Students discussed new findings with the group. They practiced skills that were identified in the resources.

5. Students practiced skills that were identified in the resources.

Design. An A-B single-subject design replicated across five participants was utilized to determine the effectiveness of PBL in group counseling for increasing assertiveness skills of the victims of bullies. For the purpose of this study, assertiveness skills included direct confrontation and seeking assistance.

Baseline. The purpose for collecting baseline data was to obtain a clear picture of the existing behavior of students and to provide a comparison to the intervention condition. According to Hayes, Barlow, and Nelson-Gray (1999), it is only when a minimum of three data points have been collected that adequate information has been obtained for a prediction of future behavior without treatment. Therefore, for this study, a minimum of five stable data points was required to participate in the study. Teachers of identified students completed a behavioral observation form twice a week for 3 weeks prior to the intervention. Students who responded inappropriately to bullying on five occurrences were selected to participate in the study.

Intervention. Following the completion of baseline, group counseling sessions were conducted twice a week for 3 weeks and teachers continued to complete behavioral observation forms. Students were told that the counselor needed some help solving a problem that many students in the school were facing. She then read the case out loud and asked students if they faced similar problems. After a brief discussion concerning student experiences, the counselor directed the students to carefully read the problem statement and identify facts from the statement. Once facts were listed, the counselor asked students to think of open-ended questions for each fact. The words *who, what, when, where,* and *why* were written on the board to serve as a prompt for the students. Questions for each fact were listed. Students identified such questions as the following: (1) Why is John frustrated and sad? (2) Why do stu-

dents tease him? (3) Why do students call him names? (4) Why do others spread rumors? (5) Why does the boy push and threaten him? (6) What does John do when these things happen? (7) What can John do when these things happen? (8) Why does he want to drop out of school? (9) What will happen if John drops out of school?

Once questions were developed, the group began forming multiple hypotheses for each of the questions. Students were told that there were no right or wrong answers and to consider their own experiences when forming hypotheses. The counselor reflected feelings, paraphrased, and summarized student comments in order to encourage the sharing of experiences. Hypotheses that were developed included the following: (1) John is frustrated and sad because others are picking on him. (2) Students tease him because they don't like him. (3) Students call him names because they are mean or jealous. (4) Students spread rumors because they don't want John to have friends or because they are jealous. (5) The boy pushes John because John is smaller than him. (6) John ignores the other students, pushes back, or teases back. (7) John can ignore them, tell the teacher, or fight them. (8) John is tired of people picking on him. (9) John will go to jail or will not get a good job. Each hypothesis was discussed by the group members and all answers were recorded. Once students had discussed their experiences and formed hypotheses for all the questions, the group then narrowed the list of questions.

To help students narrow the list of questions, the counselor read the problem statement again. She then asked students to look over the list of questions and hypotheses and to think about the most important question that needed to be answered in order to help John with his problem. After a brief discussion, students identified the question "What can John do when these things happen [teasing, pushing, name-calling, rumor spreading]?" Once the key question was identified, students were asked to consider where they could find the answer. Students listed books, the Internet, teachers, the school counselor, the principal, parents, a pastor, a youth leader, and a coach as possible resources.

The counselor had multiple resources, including books and printouts from the Internet, available for students to take home to read. Each student was asked to take home one book or Internet printout to read and to interview one person listed as a resource. The goal was to find multiple answers for the key question. Once students had read the materials and interviewed at least one person, the group discussed possible answers to the key question. These answers were all written on the board, and then students practiced the skills required for each answer. For example, if the main character in one of the books

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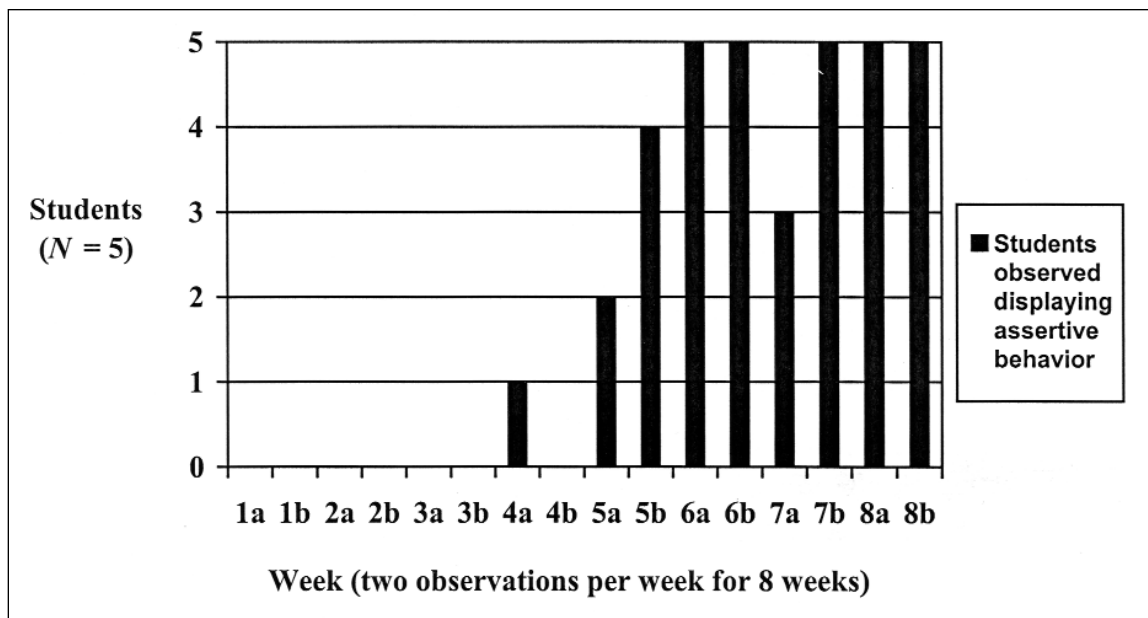
Figure 1. Total number of students ($N = 5$) responding assertively to bullying behavior per observation.

responded assertively to a bully by looking at him or her and saying "Stop picking on me," then that skill was demonstrated and practiced during the group session. If students identified a negative response that was given to them from a resource person (such as "Hit the bully and he or she will leave you alone"), then the group discussed possible consequences of such action. The group continued to read resource materials, interview resource people, discuss possible answers, and practice skills for the remainder of the group counseling sessions.

RESULTS

Trends in the data were observed using the graphical representation method, which typically is used for the analysis of single-subject design studies (Ottenbacher, 1986). Observations made during Phase A (observations 1–6) were compared with those made during Phase B (observations 7–16). Results indicated that all five students improved in responding assertively to students who bully. A summary of these findings is included in Figure 1. Complete data are available from the counselor upon request.

During Phase A, or baseline, all students responded inappropriately to bullying behavior. Once the intervention began, one student confronted a bully after the first group session. This was not considered to be a direct impact from the group because the student had only attended one session at that time. However, it is possible that the student gained confidence after meeting with others who experienced bullying and realized that he or she was not the only one being victimized. According to Yalom (1985), meeting with others and reflecting on similar experiences is expected to lead to recognition of universality and instillation of hope. Three students began responding assertively, but then responded inappropriately during a later observation. When questioned by the counselor about this occurrence, the students responded that they had tried responding assertively but this particular person was still teasing them. They chose to yell at the student in an attempt to get him or her to stop. However, after a discussion about whether or not this strategy worked, the students decided to try responding assertively once again. These students then responded assertively for the remainder of the observations. One student confronted a bully after the ninth observation and consistently responded assertively throughout the study.

The counselor noted an overall increase in assertive behavior displayed by the students. Teachers also commented that the students seemed to be more focused in the classroom and appeared to have developed better relationships with peers after going through the PBL group counseling intervention. However, this may be a result of the counseling intervention, PBL, or it may be the act of simply meeting with others who have similar problems.

Repeated measurement within subjects does allow for an estimation of the three sources of variability that need to be distinguished in research: measurement error, extraneous variability, and intervention-related variability (Hayes et al., 1999). Measurement error was reduced by giving teachers explicit instructions on how to complete the behavioral observation forms, while extraneous variability was only

minimally controlled. However, the counselor was unaware of any external event that may have affected student behavior. If measurement error and extraneous variability were not factors in this study, and the counselor believes these were not, then the data appear to support that changes in behavior occurred due to the PBL intervention.

Limitations

Counselors should note that the current study has several limitations. The A-B design fails to control for various threats to internal validity. Some of the most important threats involve the length of the baseline and intervention conditions, the number of variables changed when moving from one condition to another, and the degree and speed of any change that occurs. The threat to internal validity concerning condition length was controlled. The data shown in the baseline condition appear to be stable, thus it was appropriate to introduce the intervention. Only one variable, the introduction of PBL, was changed when moving from baseline to intervention. This reduces the threat of multiple variables affecting the data. The degree and speed of change also must be considered. The baseline condition reveals that the data have stability. When the intervention is introduced, however, the subjects' behaviors begin to change.

Single-subject designs are most effective in controlling for subject characteristics, mortality, testing, and history threats, but they are less effective with location, data collector characteristics, maturation, and regression threats (Fraenkel & Wallen, 2003). The threats of location and data collector characteristics were controlled by maintaining the same location for counseling sessions and the same teachers for data collection. However, teachers knew that the goals for the group counseling sessions included increasing assertiveness skills and effectively responding to bullying behavior. This may have influenced their ratings of student behaviors. Single-subject designs also are weak when it comes to instrument decay, data-collector bias, attitudinal threats, and implementation threats (Fraenkel & Wallen). Attitudinal and implementation threats were minimized because the counselor implemented the treatment and teachers collected the data.

Single-subject studies are weak when it comes to external validity. As a result, studies involving single-subject designs that show a particular treatment to be effective in changing behaviors must rely on replications across individuals if such results are to be found worthy of generalization. Therefore, additional study is needed to determine if PBL is truly effective for increasing assertiveness skills among victims of bullies.

Implications for School Counselors

This study provided an indication of the possible effectiveness of PBL in developing assertiveness skills among victims of bullies in a school setting. The change in student behaviors after experiencing PBL in a small group was sufficient to suggest that these new behaviors may have reflected the influence of the intervention. Because of this, it is recommended that middle school counselors utilize PBL as a group counseling technique.

Professional school counselors can successfully implement PBL as a group counseling technique by following these steps:

1. Identify five to seven students who could benefit from group counseling.
2. Develop a problem scenario that students will solve. In writing the case, first consider the objectives of the group. Then determine questions that you want students to research. Develop a realistic scenario that will lead students to ask those questions and that will meet the group's objectives. Keep the scenario short and simple so that students will only need to research two to three questions. This will allow adequate time to practice skills within the group.
3. Conduct a minimum of five group counseling sessions utilizing the process of PBL that was described earlier.
4. Evaluate the group to determine if objectives were met.

Conclusion

The PBL model was effective for increasing assertiveness skills with this particular group of students. The model fits well within the academic setting and students indicated that the problem-solving process was easy to follow. This study indicates great promise in teaching students skills that are needed while simultaneously helping them to develop problem-solving skills; however, more research is needed to determine the effectiveness of this particular intervention versus just group counseling. With the limited amount of time that school counselors have to devote to each student, the PBL methodology could be useful in teaching students a wide range of social skills and personal problem-solving skills using large and small group interventions. ∎

Teachers commented that the students seemed to be more focused in the classroom and appeared to have developed better relationships with peers after going through the group counseling intervention.

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This study indicates great promise in teaching students skills that are needed while simultaneously helping them to develop problem-solving skills.

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APPENDIX A
Assertiveness Skills Rating Scale for Teachers

Student Name: _____

Date: _____

Please observe the student throughout the day. Meet with the teacher team and discuss the student's behavior during the day. Check the appropriate line that represents the student's response to the bully or bullies:

_____ Student looked directly at the bully and told him or her to stop the behavior.

_____ Student told the bully to stop and then talked to the teacher.

_____ Student did not do any of the above behaviors.