Bully Victim Identification and Intervention Program for School Nurses

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Abstract

School nurses see bullies and their victims as visitors to the health office with physical and emotional symptoms. Yet school nurses feel unprepared and unqualified to deal with bullying issues. They are not included as team members in the whole school approach to bullying prevention. METHOD: Eleven school nurses from Greenfield, Northampton and the Union #38 School district participated in The Bully Victim Identification and Intervention Program for School Nurses. Participants completed the *Perceptions of Bullying Questionnaire* (Hendershot, Dake, Price & Larty, 2006) prior to the training, immediately following the training and 1 month after the training. RESULT: All of the nurses reported an increase in their ability to recognize the signs and symptoms of students who are bullies and victims. The number of methods they felt were effective in reducing bullying increased from 18 methods before the program to 30 after the program. The number of methods they would personally use to deal with bullies and victims increased by 35%. CONCLUSION: School nurses are in a unique position to aid bullies and victims and should be included in the prevention of and solution to this public health problem.

Introduction: Bully Victimization as a Clinical Problem in Schools

Bullying behavior is a universal phenomenon that both places youth at risk and is a manifestation of their high risk status. In the United States (US), Nansel and fellow researchers (2001) reported that the national average of students who are involved with bullying is 30%, either as victims (10.6%), bullies (13.0%) or both (6.3%). In Massachusetts, 13% of high school students and 16% of middle school students reported initiating bullying in 2007. Twenty-two percent (22%) of high school students reported being bullied in the past year (Massachusetts Department of Education, 2009).

When bullying occurs in schools, it creates an unsafe environment and causes behavioral and emotional difficulties that can interfere with learning (Glew, Fan, Katon, Rivara, & Kernic, 2005). Bullies, victims and coincidental bully/victims may experience poorer psychosocial adjustment and academic achievement, fighting, smoking, poorer relationships with classmates, increased loneliness, alcohol use, poorer perceived school climate and difficulty making friends (Nansel et al, 2001).

A whole-school approach has been identified as the most effective strategy to reduce or prevent bullying (Olweus, 1993). It is founded on the principle that "every individual should have the right to be spared oppression and repeated, intentional humiliation, in school as in society at large" (Olweus, p. 48). In order to effectively reduce bullying in schools, interventions must occur at every level of the bullying experience—the individual, class, and school levels. It incorporates a written anti-bullying policy, parent and teacher training to deal with bullying, student education about the dynamics of bullying in the form of a curriculum, and bystander intervention. Examples of interventions for each level are presented in Figure 1.

Dialogue is absent on the role of school nurses in the whole school approach to preventing bullying. When nurses were asked their perception of their role, 41% felt that someone else in the school was more qualified to address bullying and 25% felt unprepared to handle the problem. Only 15% of nurses stated there were no barriers (Hendershot, 2006).

Effects of Bullying Involvement

Health Symptoms

In a classic study, Williams, Chambers, Logan and Robinson (1996) established the association between bully victimization and common symptoms in childhood. Out of 2,623 students in London who completed questionnaires, 27% reported being bullied, and 10% reported being bullied once a week or more. Eighteen (18) school nurses then used semi-structured interviews to question the victims and complete questionnaires. Victims who reported being bullied sometimes or more often also reported not sleeping well, bed wetting, feeling sad, and experiencing more than occasional headaches and tummy aches. A significant trend of increased risk for all symptoms was associated with an increased frequency of bullying ($P<0.001$).

The trend of increased symptoms with greater frequency of bullying is also reported in a study by Due and colleagues (2005). Using the Health Behavior in School-aged Children (HBSC) survey which was administered during the 1997/1998 school year, twelve symptoms were examined in 123,227 students ages 11, 13 and 15 from 28 different countries. The symptoms included: headache, stomach ache, backache, feeling low, bad temper, nervousness, difficulties in getting to sleep, dizziness, loneliness, tired in the morning, feeling left out of things, and feeling helpless. The prevalence rates varied between countries and may reflect cultural differences in reporting patterns. However, the graded association between

victimization and health symptoms remained constant. The reported presence of each symptom increased by frequency of bullying with only one exception, that of stomach aches in Greenland children, which demonstrated a decreased odds ratio (1.10 to 0.90) with increased bullying.

In a prospective cohort study, Fekkes et al (2006) sought to clarify if bully victimization preceded health symptoms, or whether the reverse was true. They found that students who had no health complaints at the beginning of the year and were bullied during the year had high odds ratios for developing the following symptoms: depression (4.18), anxiety (3.01), bedwetting (4.71), abdominal pain (2.37) and feeling tense (3.04). When controlled for gender, only development of abdominal pain showed a statistically significant relationship for girls but not boys. Students with the psychological symptoms of depression and anxiety at the beginning of the school year had a significantly higher chance of being newly bullied (3.41 and 1.96 respectively).

Depression, Suicide and Homicide

Research consistently demonstrates symptoms of depression among bullies, victims, and bully/victims. Klomek (2007) found that the more frequently the student was involved with bullying in any role, the more likely the student was depressed, had suicidal ideation, or attempted suicide. This study included 2,341 ninth through twelfth graders in 3 counties in New York. Glew (2005) reported that students who said they were sad most days had higher odds of being bullies or victims. Camodeca and Goossens (2005) surveyed 242 Dutch students who were nominated by peers as taking one of the following roles in bullying involvement: bully, follower of bully, victim, defender of victim, outsider, and not involved. Victims were found to be the saddest of all the groups. Rigby and Slee (1999) demonstrated that while suicidality was more highly correlated with being a victim, the association was also significant for bullies.

Nansel, Overpeck, Haynie, Ruan and Scheidt (2003) reported that being a victim or bully was consistently related to four violence behaviors, those of carrying a weapon, carrying a weapon to school, frequent fighting, or involved in a fight. The Transatlantic Schools Anti Bullying Report (2007) states that bullying has been a factor in virtually every school shooting since 1992. In a study of school-associated violent deaths, Anderson et al (2001) reported that homicide perpetrators were 7 times more likely than homicide victims to have had suicidal ideation prior to the event.

Overweight and Obese Youth

Overweight and obese boys and girls are more likely to be the victims of verbal bullying (Janssen, Craig Boyce & Pickett, 2004), and the relative odds of being bullied increased with BMI. Griffiths, Wolke, Page and Horwood (2006), demonstrated that the relationship between bully victimization and increase weight existed in children as young as 7.5 to 8.5 years old, heralding the potential early onset of bully victimization for overweight and obese children.

Gay, Lesbian, Bisexual Youth

Gender role nonconformity has also been linked to bully victimization. Garafalo and colleagues used data from the 1995 administration of the Massachusetts Youth Risk Behavior Survey (YRBS) to study 9-12th graders who identified themselves as gay/lesbian and bisexual (GLB). These students were found to be more likely to have been threatened with a weapon in the past 30 days than their peers. They were also more likely to have had property damaged in the past year. Of note in this study is that more than 30 health risk behaviors were positively associated with self-report of GLB orientation, including suicidal ideation/attempts, multiple substance use and sexual risk behaviors (Garafalo, Wolf, Kessel, Palfrey & DuRant, 1998).

Russell and colleagues (2001) used data from the first wave of the Add Health Study to examine whether youths who report same sex attraction were at higher risk for being victims of violence, witness violence or perpetrate violence. The Add Health Study is the National Longitudinal Study of Adolescent Health which uses home interviews to gather data on adolescents nationwide in grades 7-12 (N=12,000). They found that youth who were romantically attracted to the same sex were more likely to have been in a fight that required medical treatment, and to have witnessed violence in the past year, compared to those attracted to the other sex. Youth attracted to both sexes had higher odds of those outcomes, and were also more likely to have been jumped or violently attacked (Russell, Franz & Driscoll, 2001). In a study of 96 college-aged gay men, Friedman and colleagues (2006) also found a significant relationship between bullying victimization in elementary, middle or high school and suicidality (Friedman, Koeske, Silvestre, Korr, & Sites, 2006).

Long-lasting Effects

The effects of being a victim or perpetrator of bullying can be long-lasting and devastating. By following eight-year old boys in Finland until their military call-up examination at ages 18-23, Sourander and colleagues (2007) found that being a victim of frequent bullying predicted anxiety disorder. Being a bully predicted antisocial personality, substance abuse, and depressive and anxiety disorders. Being a coincidental bully/victim predicted both anxiety and antisocial personality disorder. By linking 8 year-old Finnish boys and girls to hospitalization or drug treatment for mental illness between the ages 13-24, Sourander and colleagues (2009) reported that students who were identified as bullies, victims or bully-victims at age 8, had higher hospitalization and medication treatment rates than those not involved with bullying.

One-third of males identified as bully-victims had received psychiatric medication treatment. When controlled for psychopathology at age 8, female victim status predicted hospitalization.

Bully Victimization and School Nurses

Research on the school nurse's role in deterring bullying is limited. In 2006, Hendershot, Dake, Price and Larty examined elementary school nurses' perceptions of student bullying. A random sample of 404 school nurses belonging to the National Association of School Nurses (NASN) completed a survey regarding how they would deal with bullies and victims and their perceived barriers to dealing with bullying. Allowing for multiple answers, most of the nurses reported they would assess and document victims' injuries (80%), refer victims to the principal (80%), refer them to a school counselor (77%) and inform the teacher (72%). Six percent (6%) said it was not their job to deal with victims of bullying. Five percent (5%) wanted to report bullying to the police and 10% did not view dealing with bullies as part of their job. Their stated barriers to dealing with bullying included: bullying occurred in locations other than the nurses' supervising area (49%), an attitude that someone else in the school was more qualified to address bullying (41%), not having enough time (26%), and not being prepared to handle the problem (25%). Only 15% of nurses stated there were no barriers.

Borup and Holstein (2007) examined the outcomes of bully victims' annual or biennial dialogues with the school nurse in Denmark. Data was taken from a random sample of schools participating in the 1997/1998 WHO cross-sectional survey of 11, 12 and 15 year olds. (n=5205). The objective was to determine the perceived effect of the dialogues on five possible outcome measures: reflecting on the content of the dialogue, discussing the dialogue with a parent, following the advice of the school nurse, doing what the student thought was best and visiting the school nurse again. Results indicated that students who were bullied a few times or at least

weekly were more likely to perform one of outcome measures. Students who were bullied at least weekly were most likely to reflect on the content of the dialogue or visit the school nurse again.

Only one study begins to correlate the symptoms of being involved with bullying with a student's visit to the nurse's office. In 2000, Sweeney and Sweeney used a case-study method to examine the characteristics of students who are frequent visitors to the school nurse's office (FVSN) at two middle schools in a southeastern Massachusetts regional school district. Of the 3,014 visits made to the nurse's office in the 3-month period, 12% of the students made 56.1% of the visits. Complaints included headache, stomachache, dizziness, chest pain, sore/painful limbs, hyperventilation, gray pallor, sweatiness, crying, diarrhea and complaints of not feeling well. Nurses categorized these complaints as students' responses to stress/anxiety, somatic complaints, or learned illness behaviors and associated the symptoms with 6 areas of difficulties the students had: academics, peer relations, teachers, home issues, stress/anxiety, and personal constitution.

Since youths who are involved with bullying develop health symptoms and most likely present to the school nurse's office, it is reasonable to consider augmenting the school nurse's role. Education is needed, however, since school nurses may feel unprepared and may not see it as their role to intervene.

Bullying prevention education for school nurses should assist them in sculpting a role within a whole-school approach. It should increase their awareness about the bully/victim dynamic and help them to explore their perceptions and biases, particularly involving overweight/obese, GLB and learning disabled children. It should train school nurses to identify possible bully victims by their symptoms and aid them in getting the help they need. And it

should encourage nurses to consider the wider resources available to them to stop or reduce bullying.

Methods:

Eleven nurses were recruited through the Western Mass Nurse Leaders' Meeting and professional contacts to receive the BVIIP. Participation was voluntary and demonstrated by submitting a registration form. School nurses who registered for the training were assumed to be aware of the topic of bullying, and interested in learning new knowledge and skills to deal with it, resulting in a convenience sample. The training program was conducted on two different dates in November and was offered after school in order to attract a wider audience and eliminate costs for substitute nurses.

Activities included a powerpoint presentation, self-assessment of biases related to obesity and GLB youth, small group activities and discussion. Prior to the program the nurses completed *Perceptions of Bullying* questionnaire found in Appendix A (Hendershot, 2006). The questionnaire was also administered immediately following and 1 month after the training. The *Perceptions of Bullying* questionnaire was adapted by adding 10 questions regarding beliefs about the effectiveness of interventions to reduce bullying, in order to thoroughly evaluate the program.

The training took the expected 2.5 hours. Evaluation of the training was accomplished by the administration of a program evaluation tool by Seigel and Yates (2007), and which is included as Appendix B. The BVIIP was approved for 2.5 Contact Hourse from the University of Massachusetts Amherst School of Nursing which were awarded to each nurse. Finally, a resource manual for school nurses was given to each nurse.

Descriptive statistics were used to report the differences in the pre- and post-test results of the effects the training program had on the nurses' knowledge, attitudes and perceived effectiveness of interventions. These included reporting frequencies, mean scores and ranked mean scores. Data entry was frequently checked, and errors and inconsistencies were explored and corrected. When nurses chose two numbers to represent answer scores, for example 0-1, the higher number was entered.

Means were calculated on questions answered using a Likert scale, and comparisons were made between the pre-program and post-training means. Frequencies were calculated on other questions. On questions regarding perceptions of bullying Data is presented in table format and graphic figures. Means were classified as such: between 1-3 bullying was considered not a problem, 3-6 bullying was considered a moderate problem and 6-7 bullying was considered a major problem.

Responsible Conduct of Research Translation

The Bully Victim Identification and Intervention Program was guided by the ethical principles presented in the Belmont Report and the Nuremburg Code. Given the voluntary nature of participation of adult subjects, IRB approval was considered unnecessary. Confidentiality was protected through careful data management. Anonymity was preserved by aggregating responses to the *Perceptions of Bullying* questionnaire, which did not include names, and which were not linked between the preprogram, post-program and 1-month-post program administrations. Results are reported truthfully, accurately with acknowledgement of limitations and biases. Resources were used efficiently with the intention to produce the most effective results.

Fidelity and Adaptability

The BVIIP maintained high fidelity because it was developed and presented by the same person. It was this author's responsibility to follow the prescription for the program, including the implementation of the training, the administration of the questionnaires at the assigned times, and the evaluation of the program. There was some concern about the length of the program and it's fidelity to the hours necessary for 2.5 contact hours. Some flexibility and adaptability was built into the program by controlling the time allotted for small group work and deciding to show one or more videos. The allotted hours were achieved.

Results

Ten of the 11 school nurses had at least a bachelor's degree in nursing or another discipline. Six of the 11 were certified school nurses. Years as a nurse ranged from 5-40 and years as a school nurse ranged from 2 to 23. Most nurses were based in rural public schools and one worked in a private school. Only one did not work full time.

The first three questions explored their perceptions of bullying as a problem in schools across the United States and in their own schools (Table 11 and Figure 7). Answering on a scale of 1-7, bullying was thought to be a moderate problem in US schools before and after the program, with means of 4.7 and 5 respectfully. Bullying in their own schools was thought to be not a problem both prior to and following the program. An average of 2.5 episodes of bullying were reported per month with the number ranging from 0-7. The number of reported bullying incidents decreased following the training and remained the same between the 1st and 2nd post program assessment.

Table 11. Perceptions of Bullying as a Problem in Schools

	Q 1-Bullying in the US	Q2-Bullying in Your School	Q3-Average # Bullying Incidents/Month
Pre Program Mean	4.7	3.5	2.6
Post Program Mean (immediate)	5.0	3.5	2.4
Post 2 Mean	5.0	3.6	2.4

Note: Post Program mean corresponds to surveys completed immediately following the program and Post 2 Mean corresponds to surveys completed one month after the program.

Question four asked which methods the nurses would use to deal with a student who bullied another student. While the program did not discuss the characteristics of the bully and ways to deal with the bully in great depth, after the training, the number of methods the nurses would use to deal with a bully increased by 35% (Table 12 and Figure 8). All the nurses would refer the bullies to a counselor or social worker after the program, while only 10 selected that method before the program. Before as well as after the program, most nurses would make teachers and staff aware of the situation and/or refer the student to the Principal. The method of "talking with the bully about appropriate behavior" was selected by less than half the nurses prior to the training, but more than half after the training (N=4 and 8 respectively).

Table 12. Methods School Nurses Would Use to Deal with Bullies

4. How Would You Deal with a Student who has been a BULLY--PRE	TOTAL NUMBER PRE Program	TOTAL NUMBER POST Program	TOTAL NUMBER POST 2
Not Deal with the issue/Not my Job	0	0	0
Refer to Counselor or Social Worker	10	11	11
Refer to Principal	9	10	9
Make teachers and staff aware	7	10	9
Encourage BULLY to apologize	2	6	4
Have parents come to school to resolve	0	1	1
Have parents of bully and victim meet to resolve	0	1	0
Talk with BULLY about appropriate behavior	4	6	8
Team with bully & victim to work out solution	1	2	3
Report to the Police	0	1	0
Other	2	0	1
TOTAL	35	48	46

Regarding how they would deal with a student who was the victim of bullying, question five, over half the nurses would utilize the following methods both before and after the training: file an incident report, assess and document injuries, make teachers and staff aware, and refer to the principal (Table 13 and Figure 9). All the nurses would refer a victim to the school counselor

both before and after the training. Two methods were not selected as ways to deal with a victim before the program, but would be used after the training: having parents come to the school to resolve the problem and encouraging the victim to be more assertive. The latter was selected by 64% of the nurses after the program. The number of methods the nurses would use to work with a victim increased 35% after the program.

The nurses were asked their perceptions of their abilities to recognize the signs that a student was a bully or a victim using a 7-point Likert Scale (questions six and seven). While the nurses reported being moderately able to recognize the signs of both being a bully or a victim (a mean of 3.1 to 5.9), they felt more able to recognize the signs after the program (Table 14 and Figure 10), where means increased from 3.3 to 4.3 and 4.8.

Table 13. Methods School Nurses Would Use to Deal with Victims of Bullying

5. How Would You Deal with a Student who has been a Victim of bullying?	TOTAL NUMBER PRE Program	TOTAL NUMBER POST Program	TOTAL NUMBER POST 2
Not Deal	0	0	0
Refer to School Counselor	11	11	11
Refer to Principal	9	9	8
Make teachers and staff aware	8	10	9
Encourage victim to be more assertive	0	7	7
Have parents come to school to resolve	0	1	2
Have parents of bully and victim mee to resolve	1	1	1
Talk with victim ways to avoid bullying	2	8	8
Team with bully & victim to work out solution	1	3	3
Assess and document injuries	9	11	8
File an incident report	7	6	6
Other	1	0	2
TOTAL	49	67	65

Table 14. Mean Scores of Abilities to Recognize Signs of Being a Bully or Victim

	Q6--Bully	Q7--Victim
PRE Program Mean	3.3	3.3
POST Program Mean	4.3	4.8
POST Program 2	4.8	4.8

When asked about the barriers to dealing with the problem of bullying (question eight), the number of reported barriers decreased 1 month after the program (Table 15 and Figure 11). The three most common barriers before and after the program were that bullying occurs in places not supervised by nurses, a feeling that others are more qualified and not having enough time.

Table 15. Frequencies of Barriers to Dealing with Bullying

	PRE Program	POST Program	POST Program 2
None	0	1	2
Not prepared	4	1	1
Do not know the signs to recognize bullying problems	2	1	0
No support from administration	2	2	4
Others are more qualified	7	6	4
Not my job to counsel bullies and victims	1	0	1
Not enough time	1	3	2
School board would not support	0	1	0
Occurs places I don't supervise	6	10	9
No prevention efforts exist at my school	1	0	1
Other	3	3	0

TOTAL	27	28	24

Questions nine through 43 asked nurses to rate the effectiveness of methods to reduce bullying on a five-point Likert scale. Ten methods were added to the original selection for the purpose of evaluating the effects of the BVIIP. Numbers were assigned to the five possible choices with one corresponding to being not effective to five being very effective. Means were calculated based on these numbers and the means were then ranked. Averaged means were calculated for immediately following and 1 month after the program, and the resulting mean was compared to the pre-program mean.

Prior to the program, only three methods of reducing bullying were considered effective: improving supervision at lunch and recess, having consistent and appropriate discipline responses to violations of anti-bullying policies, and helping the victim to grow in self-appreciation, self-awareness and self-confidence (Table 16 and Figure 12). Twenty-eight methods were considered somewhat effective and four methods were considered minimally effective. No methods were considered very effective.

Table 16. Ranked Mean Scores of Ways to Reduce Bullying in Schools (Least to Greatest) Prior to the BVIIP

(35) Work with victims to lose weight	2.7
(34) Refer victim to websites	2.8
(33) Talking with bully--stopping	2.8
(32) Contact parents of BULLY	2.9
(31) Negative consequences for bullies	3.1
(30) Assist students--sudden behavioral changes	3.1
(29) Give victim printed information	3.1
(28) Contact parents of VICTIM	3.1
(27) Talk with victim--prevent future episodes	3.2
(26) Improve supervision--walkers	3.2
(25) Meet with bully, victim and parents to discuss the situation and potential solutions	3.2
(24) Postive consequences for students who help prevent bullying	3.3
(23) Deal with personal feelings about bullying	3.3
(22) Assist students--avoiding previous enjoyable activities	3.3
(21) Document students non-specific physical complaints	3.3
(20) Meetings to tell parents and teachers re: bullying prevention efforts	3.4
(19) Talk with victim about who could best help	3.4

(18) Report data on number of victims coming to nurse's office	3.5
(17) Prog at school for students, parents, comm. Members to raise awareness	3.5
(16) Utilize student contracts against bullying	3.5
(15) Classroom rules against bullying	3.5
(14) Assist students--worsened academics	3.6
(13) Assist students--increased absenteeism	3.6
(12) Improve supervision--gym	3.6
(11) Work with victims--social skills	3.6
(10) Establish a bullying prevention committee	3.7
(9) Improve supervision--hallways	3.7
(8) Tell students to come to nurse's office if being bullied	3.7
(7) Refer victim to school counselor, teacher, child care team	3.7
(6) Educate victim about the bully/victim dynamic	3.8
(5) Estab. Peer support groups	3.8
(4) Improve supervision--bus	3.9
(3) Improve supervision--lunch and recess	4.0
(2) Consistent and appropriate discipline responses to violations	4.1
(1) Help victim grow in self appreciation, awareness, esteem, confidence	4.2

Following the program, 14 methods were considered effective ways to reduce bullying and the rest were considered somewhat effective (Table 17 and Figure 13). One method approximated being ranked as very effective, that of establishing positive consequences for students who help prevent bullying problems by intervening or reporting them.

Table 17. Rank Order of Combined POST Program Means (Least to Greatest)

(35) Meet with bully, victim and parents	3.0
(34) Contact parents of BULLY	3.1
(33) Work with victims to lose weight	3.3
(32) Give victim printed information	3.4
(31) Refer victim to websites	3.4
(30) Talking with bully--stopping	3.5
(29) Contact parents of VICTIM	3.6
(28) Assist students--sudden behavioral changes	3.6
(27) Assist students--increased absenteeism	3.6
(26) Report data on number of victims coming to nurse's office	3.6
(25) Utilize student contracts against bullying	3.7
(24) Assist students--worsened academics	3.7
(23) Assist students--avoiding previous enjoyable activities	3.7
(22) Document students non-specific physical complaints	3.7
(21) Deal with personal feelings about bullying	3.7
(20) Work with victims--social skills	3.7
(19) Talk with victim about who could best help	3.8
(18) Talk with victim--prevent future episodes	3.9
(17) Meetings to tell parents and teachers re: bullying prevention efforts	3.9

(16) Estab. Peer support groups	3.9
(15) Refer victim to school counselor, teacher, child care team	3.9
(14) Prog at school for students, parents, comm. Members to raise awareness	4.0
(13) Educate victim about the bully/victim dynamic	4.0
(12) Improve supervision--walkers	4.1
(11) Tell students to come to nurse's office if being bullied	4.1
(10) Negative consequences for bullies	4.1
(9) Establish a bullying prevention committee	4.2
(8) Help victim grow in self appreciation, awareness, esteem, confidence	4.3
(7) Improve supervision--bus	4.3
(6) Improve supervision--gym	4.3
(5) Classroom rules against bullying	4.3
(4) Improve supervision--hallways	4.4
(3) Improve supervision--lunch and recess	4.4
(2) Consistent and appropriate discipline responses to violations	4.4
(1) Postive consequences for students who help prevent bullying	4.6

Program Evaluation

The Evaluation of the Program and Resource Materials form is presented in Appendix B. Figure 14 presents the results. Nurses were asked to rate their knowledge of several items before and after the program, their likelihood of aiding bully victims and the quality of the presentation and resource materials. Knowledge was increased as a result of the training regarding identification of what bullying is, recognizing the signs of a student who is being victimized, as well as those who act as bullies, and how to aid victims. Their likelihood of aiding bully victims also increased. Presenter knowledge and supporting materials were all rated highly. Comments received are presented below:

- I'd love to see it go into more depth re: identifying bully/bully types as well as victims.
- I particularly liked handouts and guidelines.
- I particularly liked sharing personal experiences
- All was clear and easily understood. Excellent handout.
- I paraticularly liked Nora's love for the subject.

- I particularly like discussion about intrapersonal aspect of bullying. This made me take this subject more seriously as a health issue.
- I particularly liked presenter's style, relaxed, kind manner.

Discussion

A requirement of a capstone project to acquire a Doctor of Nursing Practice degree is to apply credible research findings (American Association of the Colleges of Nursing, 2006). While bullying behavior constitutes a major public health problem, minimal research and emphasis has been placed on the role of the school nurse in reducing bullying. The intervention designed for this project is founded in research by Hendershot and colleagues (2006). They designed a survey instrument to measure school nurses' perceptions of bullying. They established face validity for the instrument by selecting items from research literature related to bullying and bullying behaviors and obtaining input from a focus group of school nurses. Content validity was established by experts in the area of bullying, survey development, and nursing. Construct validity was determined by readministration of the survey and calculation of Pearson correlation coefficients. Pilot testing confirmed the reliability of the instrument and external validity was maximized through their administration process. A random sample of 600 nurses belonging to the National Association of School Nurses was selected and 404 (67%) responded.

For the purposes of this project 10 questions were added to the survey instrument. The format for asking these questions agreed with the original instrument and the language was pilot tested during the summer. Validity may have been compromised by adding additional questions, but it was felt that these additions were necessary to fully evaluate the effectiveness of the intervention.

Hendershot and colleagues reported their results differently than how I have reported the effects of the BVIIP. I have compared preprogram and postprogram results while Hendershot reported cross-sectional one-time data. While Hendershot reported that 26.2% of nurses listed bullying as a major problem in US schools, 33% of the BVIIP participants rated it as a 6 out of 7 problem before the program and almost 50% identified it as that after the program (N=5). Only one nurse in the BVIIP (9%) sample rated bullying as a major problem in their schools (a score of 6/7), which is similar to Hendershot's results, but none of the BVIIP participants rated it as that after the program. This may reflect a gained understanding of what constitutes bullying which is confirmed in the program evaluation.

Following the BVIIP program, all of the nurses reported an increase in their ability to recognize signs and symptoms of students who are bullies and victims. They also consistently designated an increased number of methods they felt were effective in reducing bullying. The number of methods they would personally use to deal with bullies and victims increased by 35% as a result of the program. This suggests considerable empowerment because of the knowledge gained during the program.

Hendershot's sample was considerably larger than this intervention sample. Self-reported data and the choice of a convenience rather than random sample introduced some weakness into the design of this intervention program. However, postprogram responses were consistent among the participants confirming positive effects in training school nurses to deal with bullying.

Reducing or preventing bullying has the potential to elicit significant cost savings in terms of reducing violence. The Centers for Disease Control (CDC) presents costs associated with loss of productivity from a single homicide or suicide as $1.3 million and $1 million

respectively. Other savings include intangible costs from improving the quality of life of those who are obese through weight reduction/management programs that school nurses might implement. I was unable to find a reference to individual savings from weight reduction. However, Collins and Anderson (1995) calculated medication savings from weight loss in obese non-insulin dependent diabetics to be $442.80 per year.

Conclusion

A whole school-approach to preventing and reducing bullying incorporates a written anti-bullying policy, parent and teacher training to deal with bullying, student education about the dynamics of bullying, and bystander intervention. Bullying prevention activities need to be ongoing in order to sustain the positive results. School nurses are in a unique position to aid bullies and victims and should be included in the prevention of and solution to this public health problem. Documentation from nurses regarding bullying episodes and the effectiveness of their interventions could strengthen other school efforts and support grant applications to implement bullying prevention programs.

Since poor relationships and aggression characterize those involved with bullying, future research should explore the effects of social skills training for those who participate in any role. Limited research has studied the bullying dynamic involving special needs students and these students may benefit from the evaluation of interventions targeted specifically at them. Future efforts may also concentrate on the role school nurses can play in dealing with bullies. Development of a screening tool to identify both bullies and victims would also be beneficial.

Support for this type of program seems to run high and is indicated by the school nurses' willingness to participate in the program, the support of my preceptor at Frontier Regional School, the willingness of the school to host the program at no cost and the funding received

from the Sunderland Women's Club. Also, it is clear that nurses want to help with this issue and appreciate having the knowledge and skills they need to play their part in preventing and intervening when bullying occurs.

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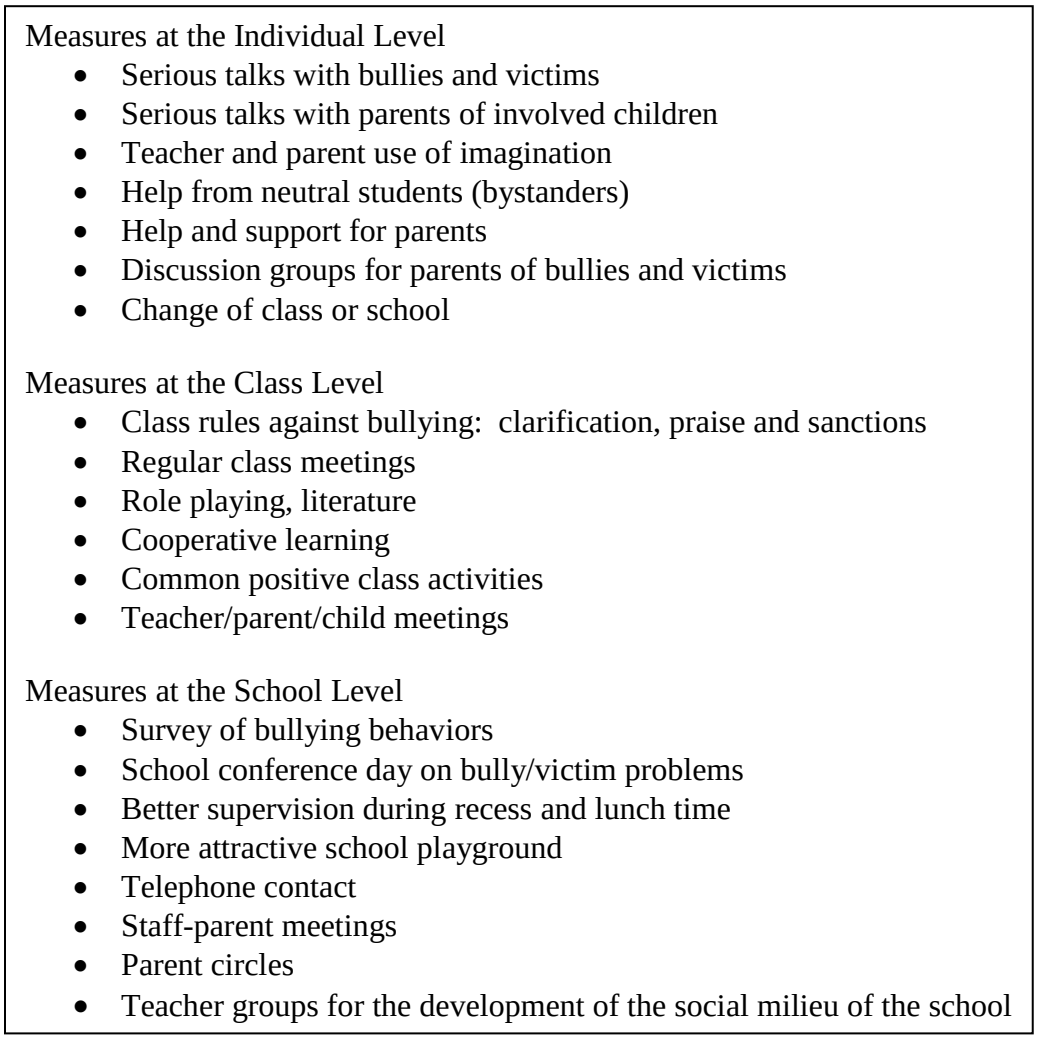
Figures

Figure 1. Overview of a Whole-School Bullying Intervention Program



Source: Olweus (1993)

Figure 2: Violence-Related Experience at School Among Massachusetts High School Students, 2001-2007

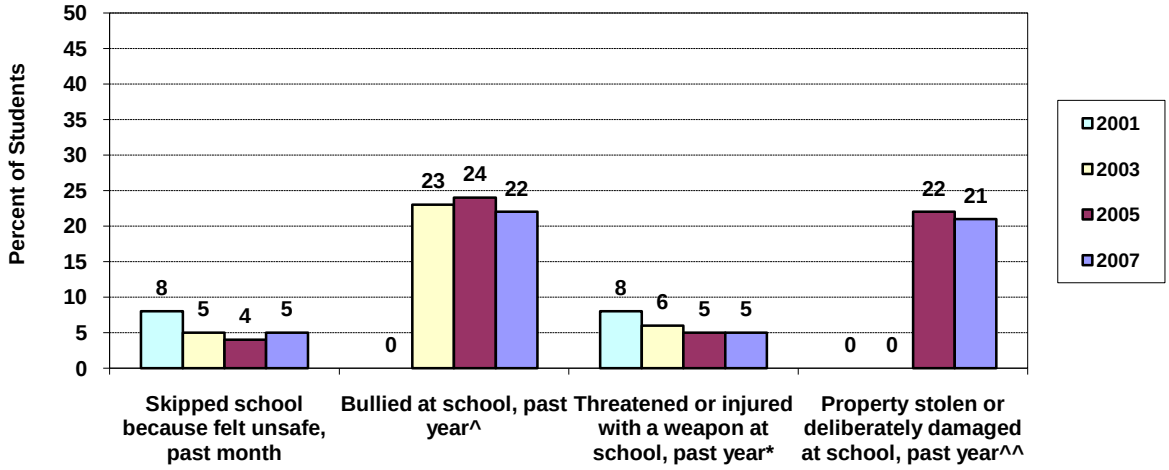


Figure 3: Violence-Related Behaviors at School Among High School Students, 2001-2007

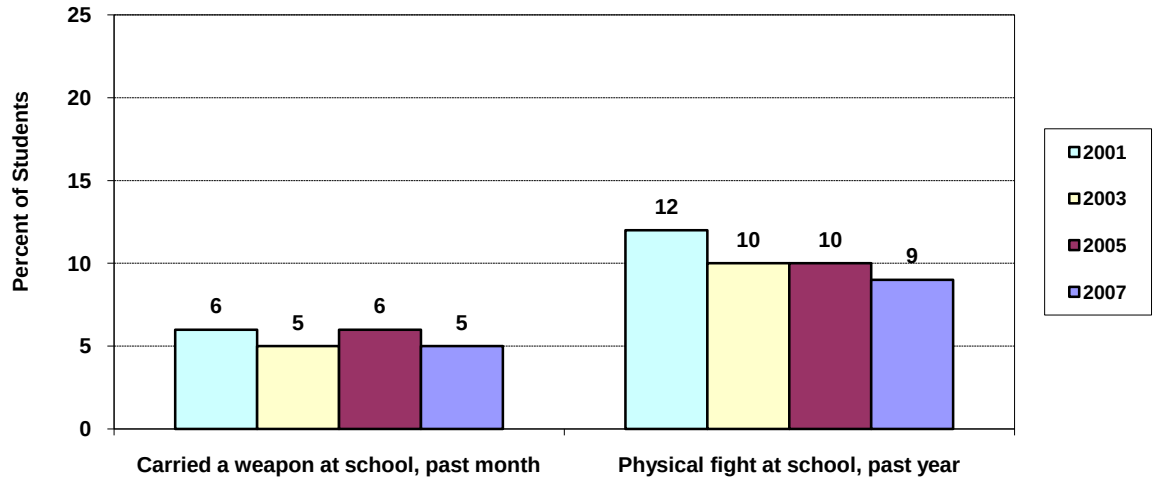


Figure 4. An Ecological Perspective: Levels of Influence

Concept	Definition
Intrapersonal Level	Individual characteristics that influence behavior, such as knowledge, attitudes, beliefs, and personality traits
Interpersonal Level	Interpersonal processes and primary groups, including family, friends, and peers that provide social identity, support, and role definition
Community Level	
Institutional Factors	Rules, regulations, policies, and informal structures, which may constrain or promote recommended behaviors
Community Factors	Social networks and norms, or standards, which exist as formal or informal among individuals, groups, and organizations
Public Policy	Local, state, and federal policies and laws that regulate or support healthy actions and practices for disease prevention, early detection, control, and management

From: NIH (2003). *Theory at a Glance, A Guide for Health Promotion Practice.* Retrieved November 14, 2008 from http://www.nci.nih.gov/PDF/481f5d53-63df-41bc-bfaf-5aa48ee1da4d/TAAG3.pdf

Figure 5. Ecological Perspective of Bully Victim Identification and Intervention for School Nurses Program

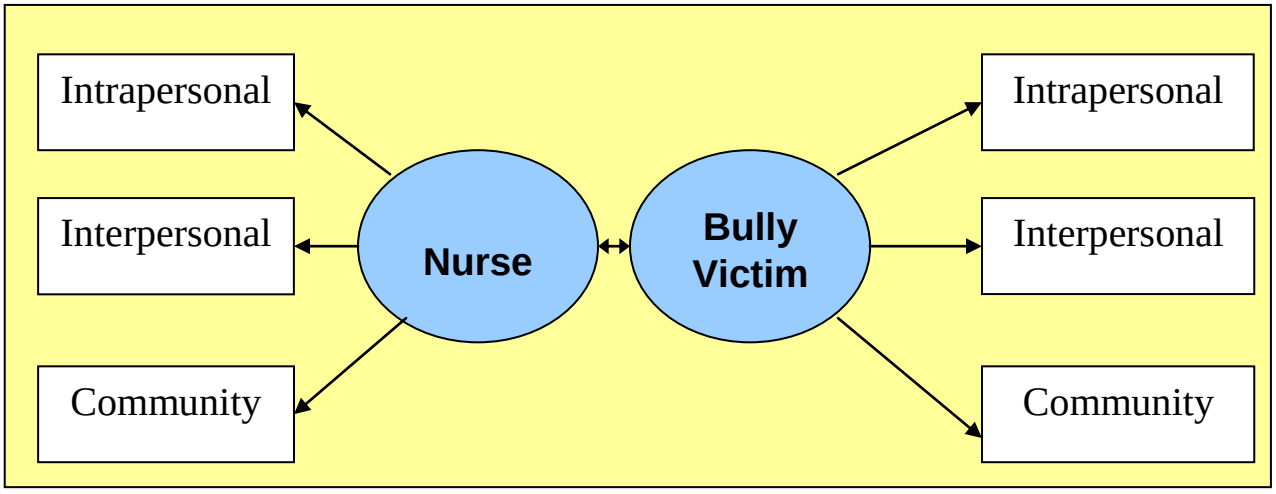


Figure 6. Antibullying Strategies for School Nurses and Bully Victims: Ecological Perspective

School Nurse

Intrapersonal Actions

- Examine personal feelings about bullying--their attitudes, strengths, role perception and biases
- Make a commitment to intervene

Interpersonal Actions

- Identify bully victims
- Aid the bully victim to develop antibullying strategies
- Aid the bully to grow in self-awareness, self-appreciation and self-esteem
- Aid the bully victim to understand the bully dynamic and the bully
- Address antecedent factors that predispose the victim to bullying such as weight

Community Actions

- Present the victim and bully to the school's Child Care Team or Peer Mediation Program
- Support and advocate for an antibullying policy that is consistently enforced
- Advocate for better supervision in areas where bullying occurs most often

Bully Victim

Intrapersonal Actions

- Self esteem building exercises
- Weight loss program
- Education about the bullying dynamic
- Seeking help with depression and anxiety feelings

Interpersonal Actions

- Receive social skills training via a curriculum
- Practice bully response strategies

Community Actions

- Report the bullying event
- Attend sessions with the school psychologist
- Request and participate in outside counseling
- Support and advocate for an antibullying policy that is consistently enforced
- Advocate for better supervision in areas where bullying occurs most often

Figure 7. Mean Scores of Bullying as a Problem

Q1: To What Extent is Bullying a Problem in US Schools
Q2. To What Extent is Bullying a Problem in Your School
Q3. What is the Number of Bullying Problems Reported to you in an Average Month?

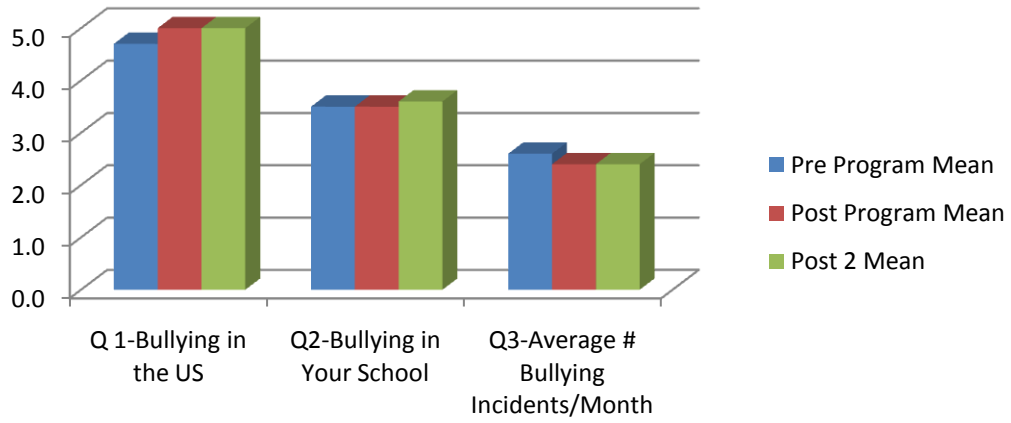


Figure 8. Methods to Deal with a Bully

Q4. How Would You Deal with a Student who has been a BULLY? (N=11)

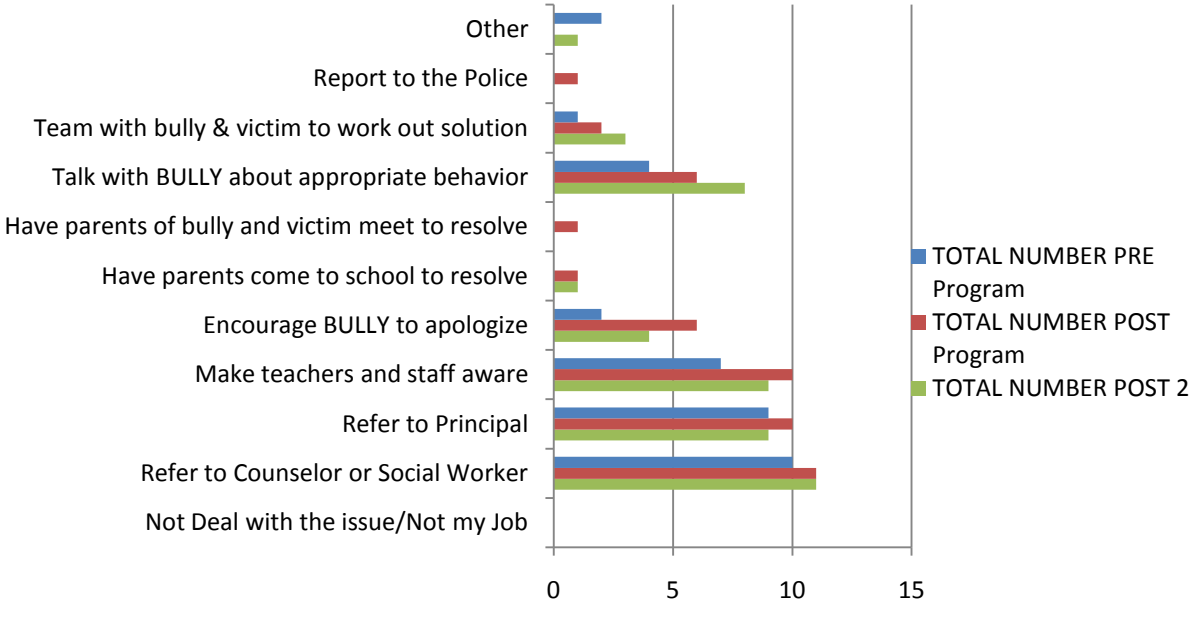


Figure 9. Methods to Deal with a Victim-Total Number

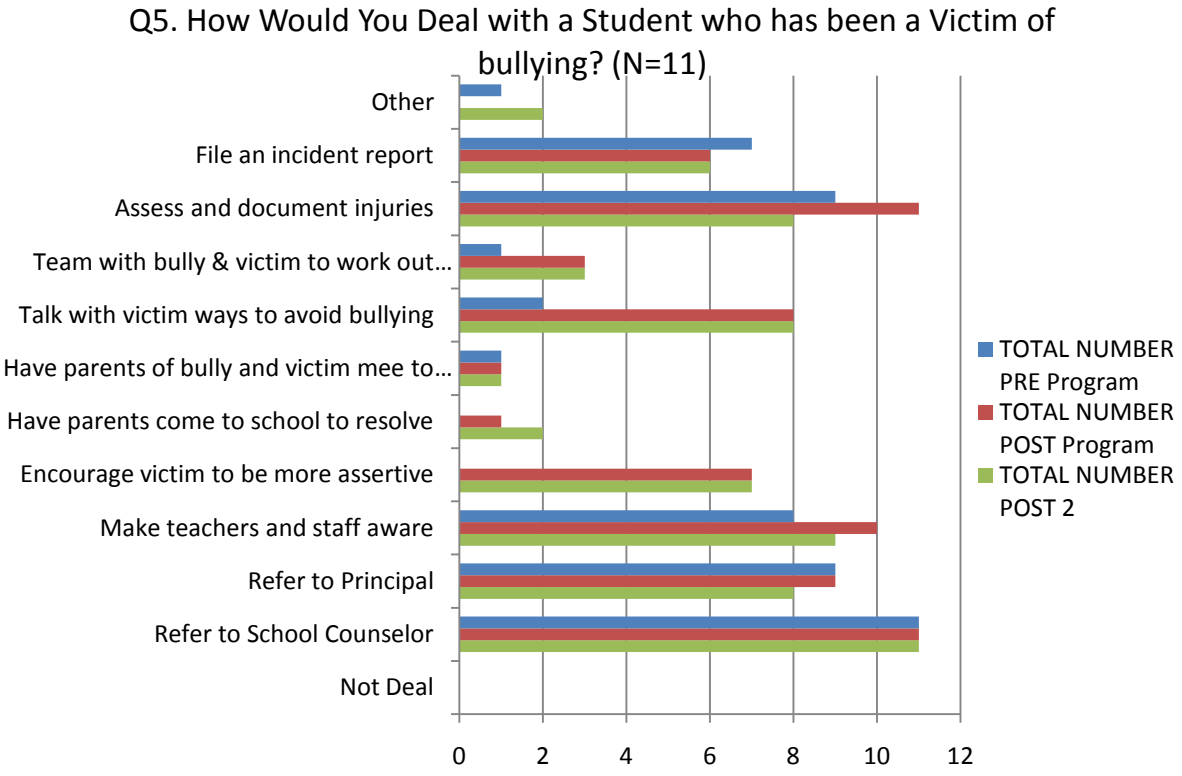


Figure 10. Mean Scores of Ability to Recognize Signs of Being a Bully and a Victim

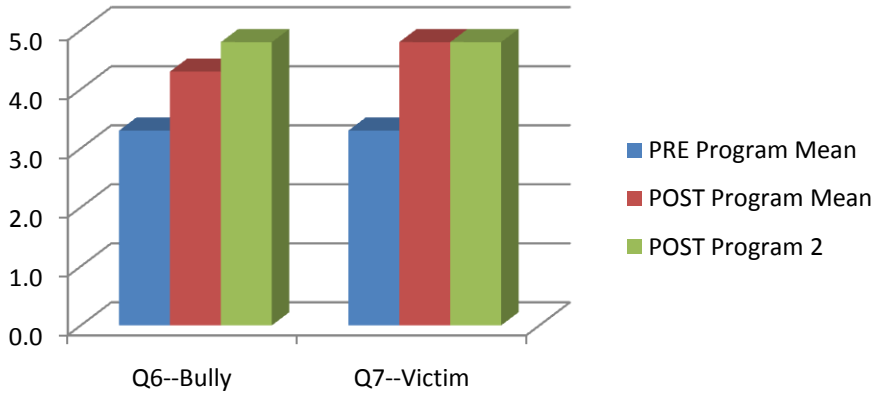


Figure 11. Barriers to Dealing with Bullying

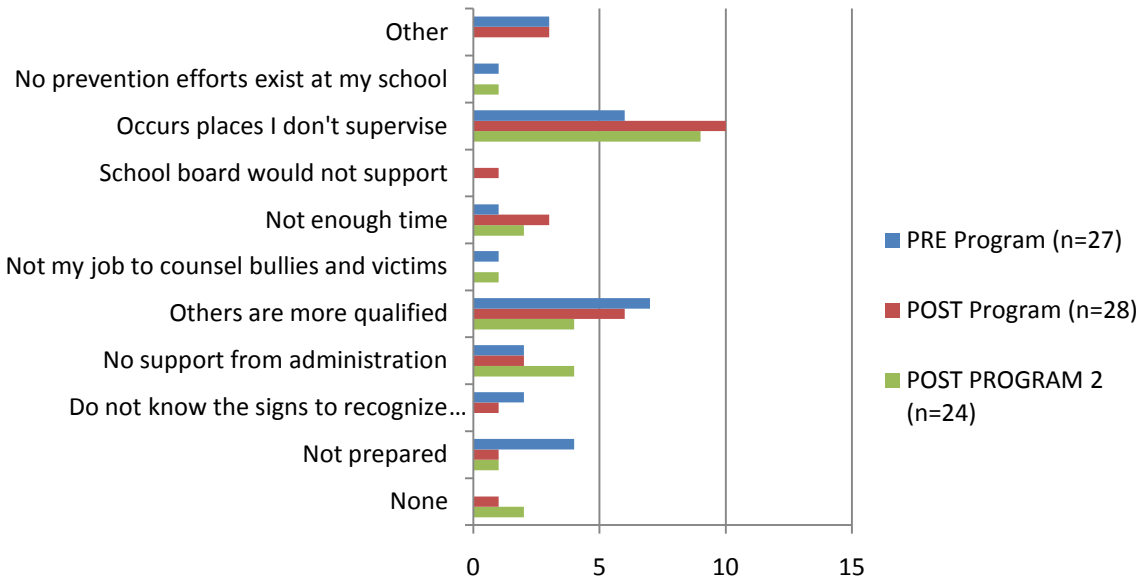


Figure 12. Preprogram Ranked Means
Perceived Effectiveness of Ways to Reduce Bullying

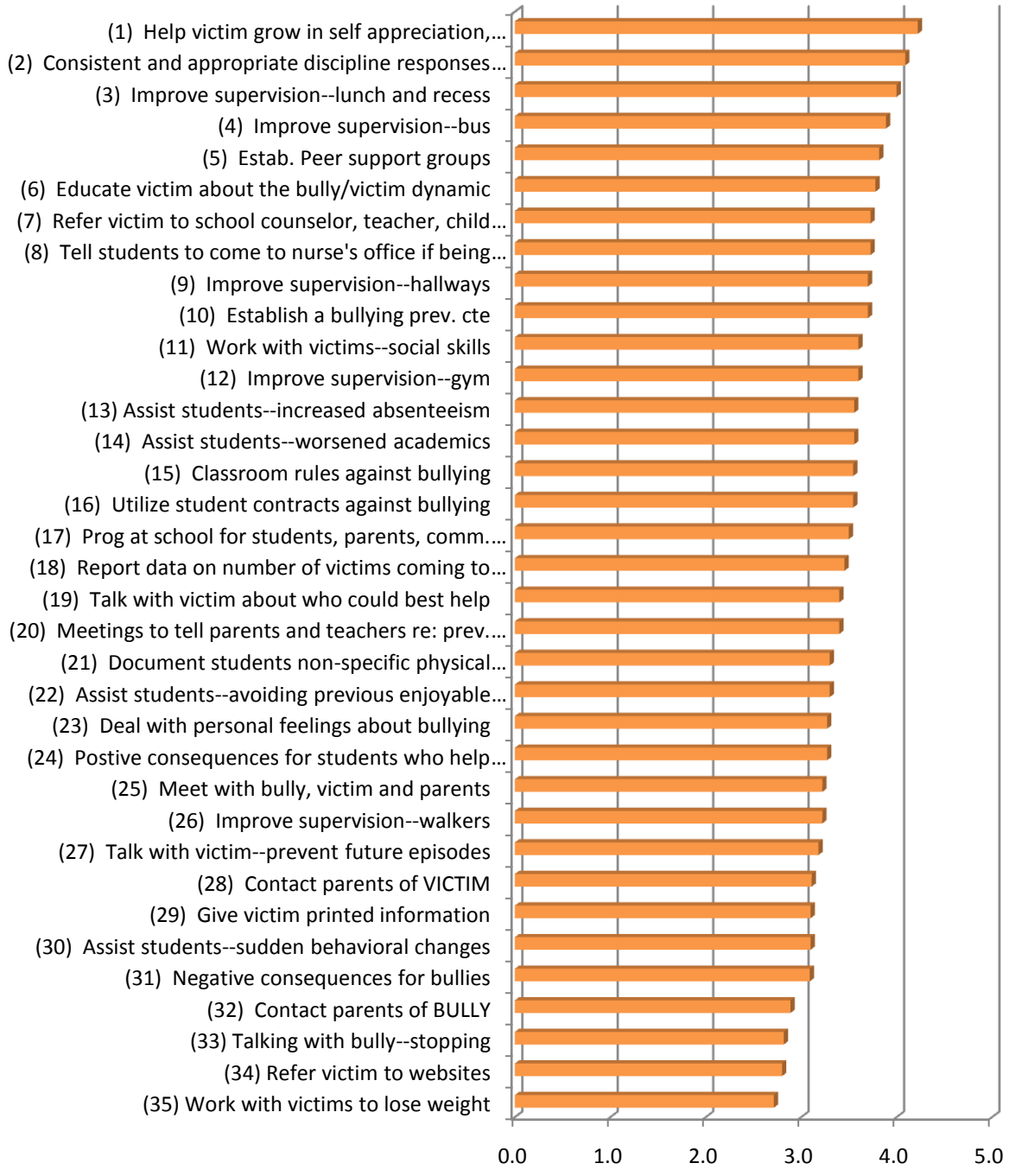
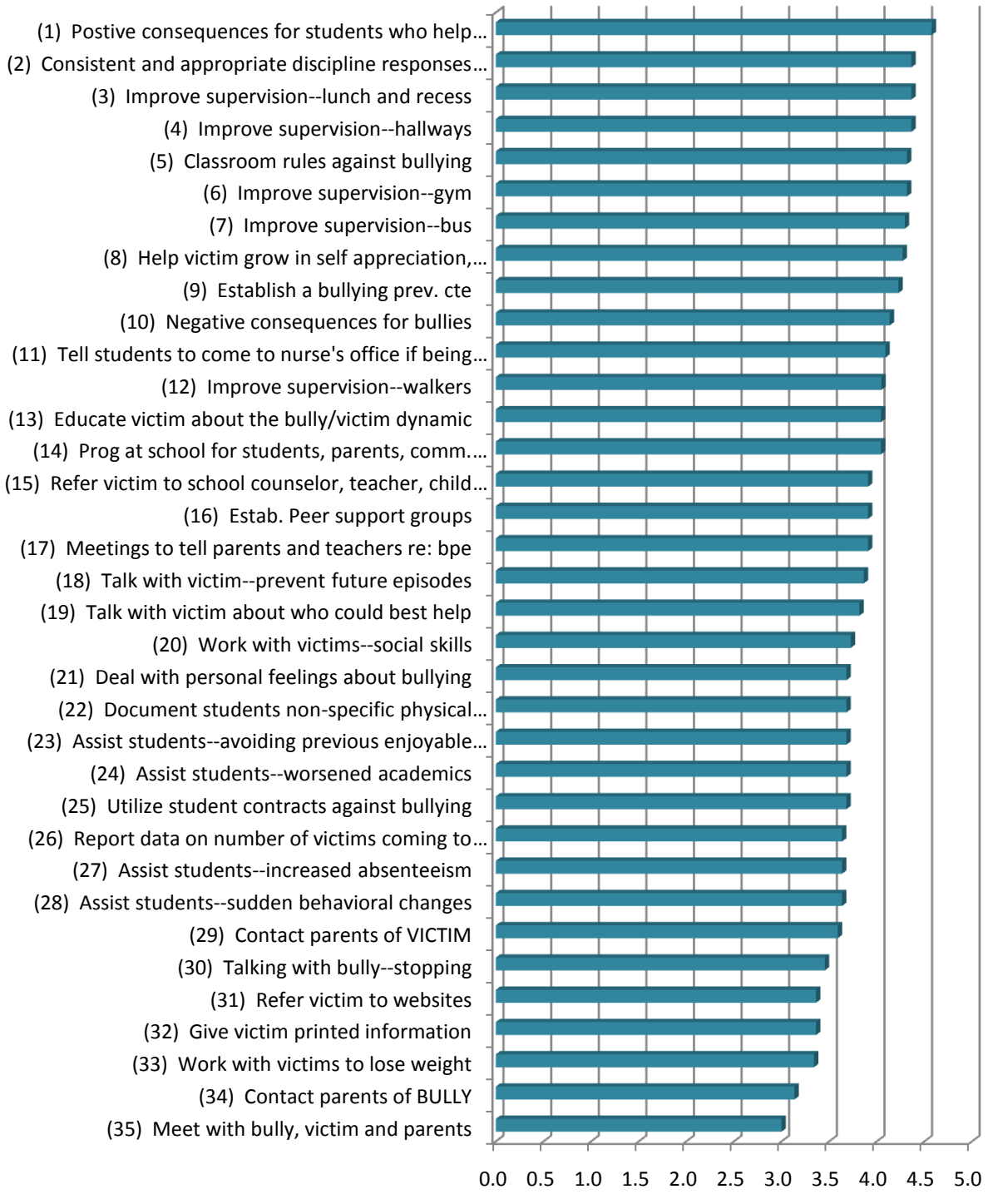


Figure 13. Rank Order of Averaged Post Program Means
Perceived Effectiveness of Ways to Reduce Bullying



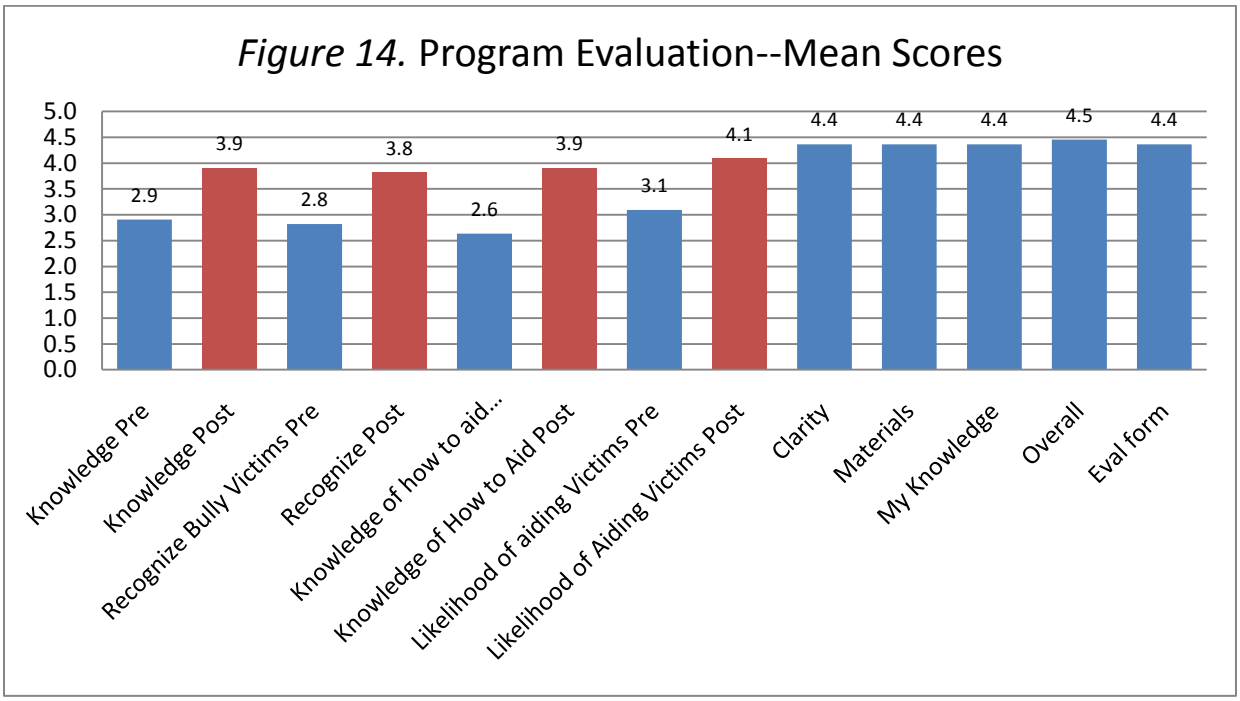


Figure 14. Program Evaluation--Mean Scores
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
2.9
3.9
2.8
3.8
2.6
3.9
3.1
4.1
4.4
4.4
4.4
4.5
4.4
Knowledge Pre
Knowledge Post
Recognize Bully Victims Pre
Recognize Post
Knowledge of how to aid...
Knowledge of How to Aid Post
Likelihood of aiding Victims Pre
Likelihood of Aiding Victims Post
Clarity
Materials
My Knowledge
Overall
Eval form

Appendix A

Bully Victim Identification and Intervention Program for School Nurses

Directions: Please complete each of the following items according to the instructions. Your responses will be **confidential.** Thank you for your professional courtesy.

1. In your opinion, to what extent is bullying a problem in **U.S. elementary schools? (circle one)**

No problem			Moderate problem			Major problem
1	2	3	4	5	6	7

2. In your opinion, to what extent is bullying a problem in **your school? (circle one)**

No problem			Moderate problem			Major problem
1	2	3	4	5	6	7

3. In an **average month** (during this school year), how many school bullying problems **are reported to you? Circle one number or identify if more than 10 monthly episodes)**

0 1 2 3 4 5 6 7 8 9 10 or identify _____

4. How would **you** deal with a student who was involved in **bullying another** student? **(Please check all that apply)**

_____I would **not** deal with this issue; it is not my job.
_____Refer to school counselor or social worker
_____Refer to principal
_____Make teachers and other school staff aware of the situation
_____Encourage the bully to apologize to the victim
_____Have the parents of the bully come to school to help resolve the situation
_____Have the parents of the bully **and** the victim come to school to help resolve the situation
_____Talk with the bully about appropriate behavior
_____Meet with the victim and the bully to work out a solution
_____Report to police
_____Other (please identify):_____

5. How would **you** deal with a student who has been a **victim** of **student bullying**? **(Please check all that apply)**

_____I would **not** deal with this issue; it is not my job.
_____Refer to school counselor or social worker
_____Refer to principal
_____Make teachers and other school staff aware of the situation
_____Encourage the victim to be more assertive
_____Have the parents of the victim come to school to help resolve the situation
_____Have the parents of the bully **and** the victim come to school to help resolve the situation
_____Talk with the victim about ways to avoid bullying
_____Team up with the bully and the victim to work out a solution
_____Assess and document injuries
_____File an incident report

_____Other (please identify):_____

6. How well do you believe you can recognize the signs of a student being a **bully**?

Not Well at All			Moderately Well			Very Well
1	2	3	4	5	6	7

7. How well do you believe you can recognize the signs of a student being a **victim** of bullying?

Not Well at All			Moderately Well			Very Well
1	2	3	4	5	6	7

8. What do you believe are the **barriers** for **you** dealing with the problem of bullying?
(Please check all that apply)

_____ There are **no barriers** for me dealing with bullying
_____ I am **not** prepared enough to deal with bullying
_____ I do **not** know what signs to look for to recognize bullying problems
_____ The administration would **not** support me handling a bullying situation
_____ Others in the school are more qualified to handle bullying
_____ It is **not** my job to counsel bullies or victims.
_____ I do **not** have enough time to address bullying at my school.
_____ The school board would **not support** efforts I would make to decrease bullying in my school.
_____ Bullying occurs at other places (lunch, recess, bus, etc) where I am not supervising.
_____ No bullying prevention efforts currently exist at my school
_____ Other. Please identify: _____

In general, how effective do you think each of the following would be in reducing bullying?

		Not Effective	Minimally Effective	Somewhat Effective	Effective	Very Effective
9.	Establishing a "bullying prevention committee" to coordinate anti-bullying efforts	NE	ME	SE	E	VE
10.	Having a presentation at the school for students, parents, and community members in order to raise awareness of bullying prevention efforts at the school.	NE	ME	SE	E	VE
11.	Improving supervision of the school hallways	NE	ME	SE	E	VE
12.	Improving supervision during lunch time or recess	NE	ME	SE	E	VE
13.	Improving supervision on the bus	NE	ME	SE	E	VE
14.	Improving supervision in the gym	NE	ME	SE	E	VE

		Not Effective	Minimally Effective	Somewhat Effective	Effective	Very Effective
15.	Improving supervision for those who walk to school	NE	ME	SE	E	VE
16.	Having meetings to inform parents and teachers about bullying prevention efforts at school	NE	ME	SE	E	VE
17.	Utilizing student contracts against bullying	NE	ME	SE	E	VE
18.	Establishing classroom rules specifically against bullying	NE	ME	SE	E	VE
19.	Establishing positive consequences for students who help prevent bullying problems (intervening, reporting)	NE	ME	SE	E	VE
20.	Establishing negative consequences for students who bully others (loss of privileges, suspension)	NE	ME	SE	E	VE
21.	When a bullying situation arises, talking with the **bully** about stopping the behavior	NE	ME	SE	E	VE
22.	When a bullying situation arises, talking with the **victim** about ways to prevent further episodes	NE	ME	SE	E	VE
23.	Contacting the parents of the **bullies** to make them aware of the situation	NE	ME	SE	E	VE
24.	Contacting the parents of the **victims** to make them aware of the situation	NE	ME	SE	E	VE
25.	Holding a meeting with the bully, the victim, and their parents to discuss the situation and potential solutions.	NE	ME	SE	E	VE
26.	Assisting students with sudden behavioral changes	NE	ME	SE	E	VE
27.	Assisting students with a worsened academic performance	NE	ME	SE	E	VE
28.	Assisting students with increased absenteeism	NE	ME	SE	E	VE
29.	Assisting students who avoid previously enjoyed activities	NE	ME	SE	E	VE
30.	Documenting students' non-specific physical complaints	NE	ME	SE	E	VE
31.	Letting students know that they may come to the school nurse if they are experiencing bullying	NE	ME	SE	E	VE

		Not Effective	Minimally Effective	Somewhat Effective	Effective	Very Effective
32.	Establishing peer support groups for students	NE	ME	SE	E	VE
33.	Having consistent and appropriate discipline responses to violations	NE	ME	SE	E	VE
	The following questions have been added to the original survey tool					
34.	Working with **victims** to lose weight if that is a problem					
35.	Working with **victims** to improve social skills if that is a problem	NE	ME	SE	E	VE
36.	Referring the **victim** to the school counselor, teacher, school disciplinarian, or child care team	NE	ME	SE	E	VE
37.	Reporting data on how many students report to the nurse's office as victims of bullying	NE	ME	SE	E	VE
38.	Dealing with my personal feelings about bullying	NE	ME	SE	E	VE
39.	Giving the **victim** printed information about ways to prevent future bullying	NE	ME	SE	E	VE
40.	Referring the **victim** to websites that will help them deal with being bullied	NE	ME	SE	E	VE
41.	Talking with the bully **victim** about who could best help them, such as a parent, teacher, counselor, friend	NE	ME	SE	E	VE
42.	Helping the **victim** to grow in self appreciation, self-awareness, self-esteem and self-confidence	NE	ME	SE	E	VE
43.	Educating the **victim** about the bully/victim dynamic	NE	ME	SE	E	VE

Demographic Information

1. What is your sex? ___Female ___Male

2. What is your race/ethnicity? ____African American

____Asian
____Hispanic
____White
____Other (please identify)_____

2. How many years have you worked as a **school nurse**?

___ # of years full-time

___ # of years part-time

4. How many years have you worked full-time as a **nurse** (including the above number)? ___# of years

5. Are you **certified** as a school nurse? __yes ___no # of years_____

If yes, which do you have? ___State certification _____National certification
___Both

6. Location of school: ___Rural ___Suburban ___Urban ___Inner city

7. Type of school: ___Public ___ Private

8. What is your highest level of education?

_____ Associate degree
_____ Diploma program
_____ Bachelor's degree ____in nursing ____other major, (please identify)_____
_____ Master's degree ____in nursing ____other major, (please identify) _____
_____ Doctoral degree ____in nursing ____other major, (please identify) _____

9. Do you currently have a bullying prevention program in your school? ___Yes ___No ___Not sure

10. I would like to have more information on bullying. ___Yes ___No ___Not sure

If yes, how would you wish to receive the information? **(Please check all that apply)**

____Professional journals
____Professional meetings, state
____Professional meetings, national
____Other (please identify) _____
_____Home study course
_____Internet
_____Workshops

Thank you for completing this survey!

Appendix B

Evaluation of the Program and Resource Materials

Please circle the number that indicates your evaluation of the item in question. Be sure to read each question carefully, as this form may vary from traditional evaluations.

	Poor	Below average	Average	Above average	Excellent
1a. My knowledge of what bullying is **prior to** this presentation	1	2	3	4	5
1b. My knowledge of what bullying is **after** this presentation	1	2	3	4	5
2a. My ability to recognize bully victims **prior to** this presentation	1	2	3	4	5
2b. My ability to recognize bully victims **after** this presentation	1	2	3	4	5
3a. My knowledge of what I can do to aid bully victims **prior to** this presention	1	2	3	4	5
3b. My knowledge of what I can do to aid bully victims **after** this presentation	1	2	3	4	5
4a. Before this presentation, I would rate the likelihood of my aiding bully victims as:	1	2	3	4	5
4b. After this presentation, I would rate the likelihood of my aiding bully victims as:	1	2	3	4	5
5. The content was clearly presented	1	2	3	4	5
6. The resource materials were helpful	1	2	3	4	5
7. The presenter was knowledgeable about the topic	1	2	3	4	5
8. Overall, this presentation was:	1	2	3	4	5
9. Based on this presentation, I would like to get more information on this topic	No	One-on-one	Beginning level	Intermediate level	Advanced level
10. This evaluation form was easy to use:	1	2	3	4	5

I particularly liked:

Suggestions for improvement: