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Does a multimedia intervention reduce bullying and victimization in third-grade urban schools?

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Introduction

Bullying is a nation-wide problem that negatively affects not only its victims but also the bystanders who witness bullying and the bullies themselves. McLaughlin et al. conducted a study using a multimedia intervention that included a counselor/teacher cognitive behavioral treatment, an anti-bullying video, and a computer-based lesson. The researchers had two hypotheses: (1) all students receiving one or more interventions would show lower rates of bullying and victimization behaviors during the post-test, and (2) an increase in treatment level would result in a more significant pre-test/post-test change.

Method

Research Design: The researchers used a quasi-experimental pre-test/post-test control group design in which the control group, for ethical purposes, also received treatment. The control group received only the counselor/teacher intervention; intervention Group One received the counselor/teacher intervention and the videotape intervention; and intervention Group Two received all three interventions (counselor/teacher, videotape, and computer).

Participants: The students involved in this study were third-graders attending three schools within the same mid-western district. The control group consisted of 36 students, 30 of whom were African American, 2 European American, and 4 biracial. Intervention Group One was composed of 34 students with an ethnic breakdown of 1 African American, 27 European American, 2 Hispanic, and 4 biracial. Intervention Group Two had 40 students: 3 were African American, 35 European American, 1 was biracial, and 1 did not disclose his/her race.

Instrument: The Reynolds Bully Victimization Scale (BVS) was used as both a pre-test and post-test with all participants. The BVC focuses on overt peer aggression and relational aggression and contains items related to both experiencing and doing bullying behavior.

Intervention: All three research groups received the counselor/teacher intervention 1 hour each week for 8 weeks. This intervention, based on cognitive behavioral theory, included an Internet search to define bullying terms, discussions of self-esteem and conflict resolution, meetings

regarding the school's rules about bullying, and an analysis of a bullying incident (including role-plays).

In addition to the counselor/teacher intervention, Groups One and Two also received the video intervention, which consisted of three videotapes shown during weeks 2, 5, and 7. The videos were designed to help students identify and reduce bullying behaviors, and each video taught a specific anti-bullying method. After viewing the videos, the counselor discussed its content with the group.

The third intervention, the computer program, was offered only to intervention Group Two. This intervention included learning relaxation techniques and taking quizzes based on mini-scenarios in which students read a short paragraph about a social interaction and were then asked to identify the bully and the victim in the scenario. Students worked with the computer-based programs at their own pace at a maximum rate of once per week.

Results

All groups showed a decrease in bullying and victimization scores on the post-test. However, only intervention Group Two showed a statistically significant reduction in bullying scores (ES=.47 and p=.001), as compared to the control group (ES=.19 and p=.04) and to intervention Group One (ES=.13 and p=.15). Group One (ES=.43 and p=.001) and Group Two (ES=.48 and p=.004) showed statistically significant reductions on the victimization post-test as compared with the control group (ES=.18 and p=.08).

The post-test was repeated twice after an undisclosed amount of time, with findings indicating that there was a further reduction in self-reported bullying and victimization. The exact scores were not published in the report.

Implications

The researchers' first hypothesis, that all groups would show a reduction in bullying and victimization scores, proved to be true. The second hypothesis, that increased treatment levels would result in more significant changes, proved to be only partly true. Group Two, which received all three interventions, demonstrated the highest effect size for bullying; however, the control group, which received less treatment than Group One, showed a slightly higher effect size than Group One. The second hypothesis did hold true on the victimization post-test. Intervention Group Two showed the highest effect size for victimization scores; intervention Group One showed the next highest effect size, and the control group showed the smallest effect size.

Critical Perspective

Measurement: The Reynolds Bully Victimization Scale was used for both the pre-tests and post-tests. The BVS is a self-reporting method in which students indicate their level of anger and behavior over the past month. The test covers both male and female patterns of bullying and ranks scores on a range from *normal* to *moderately severe* to *highly severe*. This test is

appropriate for students in grades 3 through 12 and directly relates to the outcomes that the researchers were measuring, i.e. the propensity of students to bully or feel bullied in school.

Comparison Groups: The researchers did not assign students randomly to groups; rather the three different schools served as the three separate groups. The ethnic breakdown of the three groups was not the same: over 80% of the students in the control group were African American whereas only 3% of intervention Group One and 8% of intervention Group Two were African American (their majorities were European American). These differences in breakdown pose threats to validity.

The study used a strong pre/post-test design, in which all students were tested before and after the intervention. Each of the three groups was given a different level of treatment and the control group was not a no-treatment group (for ethical reasons). There was no placebo group or no-treatment group.

Statistical Analyses of Outcome Variables: The total number of research participants was 110 students; these students were then divided into three treatment groups. The multimedia treatment groups showed a medium effect size, however, the researchers used a measurement for effect size (Cohen, 1977) with different standards of measurement (.025 small, .15 medium, .35 large), and were able to state that effect sizes were large for intervention Groups One and Two.

Implementation Fidelity: A team of one counselor and one teacher provided the cognitive behavioral treatment for the specified amount of time at each site, thus maintaining implementation fidelity. The researcher of this study, who also designed the intervention, may have created a manual for counselors and teachers to use, however that detail is not mentioned. Furthermore, it is also unclear whether the teacher and counselor met with the researcher each week to ensure that they were properly implementing the intervention. Theoretically the computer program was an effective intervention, assuming that there was treatment fidelity and every student completed the exercises (this was not stated).

Replication: This report does not state whether these same researchers or other researchers have conducted this study with either the same or a different population.

Ecological Validity: This study was conducted in a public school. While the ethnic breakdown of the groups is given, the diversity of the entire school is unknown. Given that more than one ethnic group participated in the study, it would be helpful to know the breakdown of outcomes for each ethnic group.

Persistence of Effect: The researchers state that the post-test was administered again after some time, the results of which showed that the bullying and victimization behaviors were still at a lower level than pre-test. However, the timeline for the follow-ups were not made available, nor were the follow-up scores.

Summary

This study shows promising evidence that bullying behaviors can be diminished by interventions which use several modalities. In this study, a teacher/counselor cognitive behavioral intervention, an anti-bullying video, and an interactive computer program were all successfully used to decrease bullying and victimization behaviors. Students who received all three interventions showed the largest decrease in bullying. The video and computer programs were particularly effective at decreasing students' self-reported experiences of being bullied. One caveat with any bullying prevention intervention is that increases in student awareness and knowledge can actually result in increases in *reports* of bullying and victimization (which may or may not reflect changes in actual incidences) because students are more aware of the issues and definitions.

A possible practical application of this study is the researchers' use of technology in the delivery and content of the intervention. Many students today have been raised using technology and feel comfortable with this modality. Internet searches, video interventions, and computer programs seem promising ways to teach about important subjects such as bullying.

Multimedia modalities provide flexibility in terms of when, where and by whom interventions are provided. This study illustrates that multiple types of interventions are effective and efficient supplements to more traditional bullying prevention lessons.