

An evaluation of a drama program to enhance social relationships and anti-bullying at elementary school: a controlled study

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SUMMARY

Drama, theater and role-playing methods are commonly used in health promotion programs, but evidence of their effectiveness is limited. This paper describes the development, implementation and evaluation of a school-based drama program to enhance social relationships and decrease bullying at school in children in grades 4–5 (mean age of 10.4 years). Students (n = 190) were recruited from two primary schools with similar demographics and socio-economics in the Southern Finland and purposively allocated either to an intervention group or a control group. The drama program included classroom drama sessions, follow-up activities at home and three parents' evenings concerning issues of social well being during the school year September 2007–May 2008. Data on social relationships in the class room and

experiences of bullying were obtained before and after the program using self-completed questionnaire from the same students (n = 134). The response rate was 71%. No differences in socio-demographics existed between intervention group and control group at pretest. The positive effect on social relationships resulting from the intervention approached statistical significance (p = 0.065). Moreover, the positive effect was found to be statistically significant in the high-intensity intervention classes (p = 0.011). Bullying victimization decreased 20.7 percentage units from pretest (58.8%) to posttest (38.1%) in the intervention group (p < 0.05). The study indicates that using applied drama and theater methods in the classroom may improve children's social relationships at school.

Key words: bullying; intervention; school children; social relationships

INTRODUCTION

Social relationships at school have an important role in subjective health and well being of children (Konu *et al.*, 2002; Currie *et al.*, 2004; Keyes, 2006). Social health defined as a qualitatively significant dimension of health includes, for example, interpersonal relationships and communication with others (Bauer *et al.*, 2006). Positive family and peer relations predict better

child's adjustment, i.e. less aggressiveness and depression and more empathy for others (Laible *et al.*, 2000).

In the theoretical School well-being model (Konu and Rimpelä, 2002), social relationships are seen as one category of holistic well being in school. In this model, well being is divided into four categories: school conditions, social relationships in school, means for self-fulfillment and health status. Social relationships

refer to the social learning environment, student–teacher relationships, relations with schoolmates, group dynamics and bullying (Konu *et al.*, 2002).

Student–teacher relationships and teachers' care for pupils appear to be important for children's subjective well being. Hoy and Hannum see teacher affiliation and regard for students as a part of a healthy school climate (Hoy and Hannum, 1997). When pupils are asked how they like school, they will often reply how they like their teachers (Sabo, 1995). Having no difficulty working in teams and getting along with schoolmates has been found to be connected to girls' higher subjective well being, but not so among boys (Konu *et al.*, 2002).

Bullying is a universal group phenomenon based on social relationships and roles in the group (Pörhölä *et al.*, 2006). Bullying at school has been widely studied by Olweus (Olweus, 1996) and Salmivalli *et al.* (Salmivalli *et al.*, 1996). They have also developed an effective intervention program against bullying at school (Olweus, 1996; Salmivalli *et al.*, 2009). Salmivalli *et al.* (Salmivalli *et al.*, 1996) have identified six different participant roles played by individual students in the bullying process: bullies, victims, bully's assistants and reinforcers, victim's defenders and outsiders. The importance of the role of bystanders' influence on bullying has been deemed to be significant, i.e. the bystander can either halt or encourage the bully (Gini *et al.*, 2008).

Bullying is defined in several studies including this one as follows: *A student is being bullied when another student, or group of students, says or does nasty and unpleasant things to him or her. It is also bullying when a student is teased repeatedly in a way he or she does not like, or when he or she is deliberately left out of things* (Child poverty in perspective, 2007). Studies based on large databases show that 8–14% of elementary school students were victims of bullies at least once a week (Srabstein *et al.*, 2006). In OECD countries, 17–48% of 11-, 13- and 15-year-old students reported having been bullied in the previous 2 months (Child poverty in perspective, 2007).

Not being bullied in school is associated with higher subjective well being (Konu *et al.*, 2002). Being bullied or being a bully is associated with increased health problems and poorer emotional and social adjustment (Nansel *et al.*, 2001; Srabstein *et al.*, 2006; Klomek *et al.*, 2008). Both

bullying and victimization during early school years are public health signs that identify boys who are at risk of suffering psychiatric disorders in early adulthood (Sourander *et al.*, 2007). Increasing school alienation had connections with an increased risk of bullying, whereas increasing support from teachers and peers decreased the risk (Natvig *et al.*, 2001).

Drama, theater and role-playing methods are quite commonly used and recognized in health promotion interventions, but research evidence of their effectiveness is limited. A recent systematic review (Joronen *et al.*, 2008) showed that school-based drama programs succeeded in increasing knowledge and positive attitudes related to health behavior, such as healthy eating (Perry *et al.*, 2002) and sexual health (Harvey *et al.*, 2000). Additionally, positive effects of drama programs on social skills have been reported (Wright, 2006; Wright *et al.*, 2006). Drama programs have been enjoyed by participants (e.g. Perry *et al.*, 2002) and positive experiences in social health have been reported; these include increased self-knowledge, teamwork skills, empathy and empowerment (Toivanen, 2002; Häkämies, 2007). According to Moneta and Rousseau (Moneta and Rousseau, 2008), school-based drama process helps emotional expression and emotional regulation of students.

In drama, the learning is based on the dialogic relationships between fiction and reality (Heikkinen, 2002). By entering fictional world created in the drama, the students and teachers can move on safely into it. In this drama-learning process, the student creates new relationships of meaning through transformative process. The student and teacher gain new perspectives about themselves, each other, and on reality [(Østern, 2003), p. 32].

Drama can be used to give space to articulate and respond to emotions concerning bullying, to model and practice non-violent responses to aggression, to consider the consequences of one's actions, and to empower children to stand up to bullying; and channel energy into performance (Johnson, 2001). The fictional world provides opportunity for independent thinking, cooperation, for a healthy release of emotion and to build social awareness (McCaslin, 2000). Effective anti-bullying projects are utilizing drama methods as one means of the program (e.g. Peterson and Rigby, 1999; Salmivalli *et al.*, 2005).

The aim of this study is to evaluate the effects of a school-based drama program on social relationships in the class room and bullying and victimization of school-age children. A further aim was to determine whether the program intensity influenced the outcome in terms of improved social relationships and decreased bullying experiences.

METHODS

Study design

The study has a quasi-experimental longitudinal design. One school was provided the drama program and they agreed to participate in the program and in the study. After that, a similar school which matched the socio-demographics of the intervention school was identified and they also agreed to participate in the study. The control school was not provided the intervention. Both intervention and control schools had similar backgrounds and were public comprehensive schools in a district of 300 000 inhabitants in Southern Finland. Both schools had two 4th and two 5th classes and all these classes of the schools participated in the study. The program was implemented in four class rooms (two 4th and two 5th grades, in the age range of 9–12 years) during the school year September 2007–April 2008.

A pretest was conducted in the intervention and control schools in September 2007. The intervention school received the drama program

after the pretest, during the school year 2007–2008. The control group carried out a common school curriculum. A posttest was conducted in the intervention and control schools in May 2008.

Description of study sample

There were 190 eligible students. Questionnaires were filled in by 134 students both at pretest and posttest; thus, the response rate was 71%. The response rate for the intervention school was 75% and for the control school 65%.

Table 1 presents the socio-demographics in both intervention ($n = 78$) and control ($n = 56$) groups at the pretest. One-half of the students were boys. The mean age was 10.4 years ($SD = 0.67$). Most (70%) students lived in an intact family, whereas 15% lived in a single parent family, 12% in a step family and 3% in another family type. Ninety eight percent of the students were from Finnish heritage. No statistically significant differences existed in age, gender, family type or parents' education composition between intervention and control groups.

The intervention

The drama program, premised upon the drama theories (Owens and Barber, 1998; Heikkinen, 2002) and social cognitive theory (Bandura, 1986), was designed by the first author and experienced drama expert and educator AH with the teachers. Drama is seen as creating

Table 1: Socio-demographics of the students

Variable	Intervention school, % (n)	Control school, % (n)	Mean, % (n)	Sig. test, p^a
Gender				0.484
Girls	52.6 (41)	46.4 (26)	50.0 (67)	
Boys	47.4 (37)	53.6 (30)	50.0 (67)	
Class				0.975
4th grade	46.2 (36)	46.4 (26)	46.3 (62)	
5th grade	53.8 (42)	53.6 (30)	53.7 (72)	
Family type				0.137
Intact family	76.6 (59)	61.1 (33)	70.2 (92)	
Single parent family	11.7 (9)	18.5 (10)	14.5 (19)	
Step family	7.8 (6)	18.5 (10)	12.2 (16)	
Other	3.8 (3)	1.9 (1)	3.1 (4)	
Parent's education (86% mothers)				0.148
Less than high school	21.7 (15)	37.7 (20)	28.7 (35)	
High school	44.9 (31)	34.0 (18)	40.2 (49)	
More than high school	33.3 (23)	28.3 (15)	31.1 (38)	

^a χ^2 test.

'potential space' for growth and critical reflection within participatory and socio-cultural learning. In the learning process, drama helps emotional expression and awareness and fosters self-knowledge (Heikkinen, 2002). Social cognitive theory identifies human behavior as an interaction between personal factors, behavior and the environment. Social cognitive theory is helpful for understanding and predicting both individual and group behavior and identifying methods in which behavior can be modified or changed (Bandura, 1986). One of the major premises of the drama theory and social cognitive theory is that we can learn by observing others and by receiving feedback from others. Both theories also share the assumption that learning is based on self-reflection and interaction between environment and person. Drama additionally emphasizes learning through the dialectics between actual and fictional contexts.

This universal program focused on improving social relationships and social and emotional well being in the classroom which may also reduce bullying. Drama program focused on supporting to improve the following functions of the students: empathy, social competence, student-teacher interaction, child-parent interaction, recognition on of values and emotions [see e.g. (Häkämies, 2007)]. Pretexts of the drama sessions were related to friendship, loss of a friend, bullying, support of the bullied class mate, tolerance and child abuse [e.g. (Owens and Barber, 1998; Owens *et al.*, 2002)]. No exact manual was used but the teachers implemented the drama sessions based on two distributed drama handbooks.

Home activities included interactional tasks between parent and child. For instance, the child interviewed his or her parent about the school life and bullying when the parent was a school child. Parents' evenings were based on themes which emerged from parents' and teachers' written suggestions. Themes were bullying, family-school cooperation, parental monitoring and common rules at school. Parents' evenings were tutored by a drama teacher (AH) who used drama methods to enhance interaction between parents and parents and teachers. A recent meta-analytic review showed that parental involvement and parental training enhanced behavior and acquisition in children (Kaminski *et al.*, 2009).

The program was delivered by regular class teachers or a class teacher and a school nurse as a dyad. The program was delivered to an entire

classroom, i.e. each teacher implemented the program in her or his own class. One hundred and four students participated in the program. Table 2 presents the program details in each intervention class. The mean of total times the classes were exposed to the intervention was 9.75, ranging from 6 to 16.

The intended/preferred drama program consisted of one drama session per month from September to April, altogether eight sessions. The implemented drama program included classroom 4-9 drama sessions (depending on the teacher), 1-4 follow-up home activities and three parents' evenings. Classroom drama sessions were based on process drama where students and teachers work together to create a fictional world within which issues are considered and problems can be solved.

Training and monitoring of the teachers and school nurse

Four teachers and one school nurse were provided detailed instructions for using drama with children by a drama educator, AH and the first author during a 2-day seminar on drama techniques April 2007. Two drama handbooks were distributed. The books consisted of pretexts for handling social and emotional skills, such as listening to others, working in a group and argumentation in the class room drama session. Additionally, five counseling sessions and online counseling through email were provided by the same drama experts during the school year 2007-2008. Counseling sessions included mutual reflections of previous drama sessions and home activities and sharing ideas for the coming sessions and home activities.

Measures

The students completed one scale of the School well-being profile which has acceptable reliability and validity [e.g. (Konu and Lintonen, 2006)]. The scale of Social relationships in the class room consisted of seven items concerning student-student and teacher-student relationships. Examples include: 'Class mates help each other if you have troubles', 'Class mates intervene if someone is been bullied' and 'Our teacher is fair'. The original scale had a 3-point likert scale (never, sometimes, always). The instrument used in this study had a visual analogue scale (100 mm)

Table 2: Components and intensity of the drama program implemented in four classes

Components of implemented drama program	Class A (4th grade), <i>n</i> = 14	Class B (4th grade), <i>n</i> = 22	Class C (5th grade), <i>n</i> = 18	Class D (5th grade), <i>n</i> = 24	Mean
School-based elements					
Number of drama sessions (á 1.5 h)	4	6	4	9	5.75
Number of follow-up home activities	2	1	1	4	2.0
Family-based elements					
Median number of parents' evenings (max 3) attended by parents	1	1	0	1	0.75
Median number of follow up home activities participated in by parents	1	1	1	2	1.25
Exposures total	8	9	6	16	9.75

where respondents specified their level of agreement to a statement by indicating a position along a continuous line between two endpoints (☺ (happy face) = agree; ☹ (sad face) = disagree). Due to the new scales, the questionnaires were pilot tested on two groups of students and teachers of the grades 4 and 5 (37 students and 2 teachers) in one school in Eastern Finland. Internal consistency (Cronbach alpha) was 0.69 at pretest and 0.81 at posttest.

Bullying and victimization were measured on two questions: during the last school year how often have you been bullied at school? How often have you bullied at school? The response alternatives were *never, once or two times, many times*. The validation of the bullying questions has been done with the Finnish School Health Promotion Survey data (Konu *et al.*, 2002) and with the School Well-being Profile data (Konu and Koivisto, submitted for publication). The reliability studies have not been done for these questions separately, but the questions have been included in the Social Relationships category and the Cronbach alpha was 0.79 for this category in the primary school data (Konu and Koivisto, submitted for publication). Demographic variables including age, grade, gender and family type were asked in the students' questionnaire. Additionally, parents completed information about parental education. Eighty six percent of the respondent parents were mothers.

Background variables of age, grade, gender, family type and nationality were asked in the students' questionnaire. Additionally, parents completed information about parental education. Eighty six percent of the responded parents were mothers.

Data collection

The data were collected using a self-administrated anonymous questionnaire with the code of identifier thus linking the pretest and posttest data at the individual level. The administration of the questionnaires to the students was completed during the school class in all the study schools by the first author. Students were encouraged to ask questions if they did not understand the meanings of questions. The study was approved by the head teachers. Written permission was received from one parent of each family before the implementation of the program. In return for participation in the study, students and parents received a movie ticket or a voucher for a book store (7€).

Data analysis

Data from the pretest and posttest were entered into SPSS Statistics software (SPSS Inc., Chicago, IL, USA) version 16.0 for statistical analyses. The first analyses tested the baseline equivalence of the socio-demographics and outcome measures between intervention and control groups using χ^2 test and *t* test of independent samples.

The second analyses tested for differences from pretest to posttest among students. Paired samples *t* test was used to compare the control group to the whole intervention group and also the high-intensity intervention group in terms of the pretest and the posttest outcomes of social relationships. Third, repeated measures analysis of variance (ANOVA) was used to evaluate changes in social relationships in the class room; with grouping (intervention or control) as the

Table 3: Mean social relationships levels and mean difference by group and time; *ps* for *t* tests and repeated measures ANOVA for the whole sample ($N = 134$)

Social relations in the class	Intervention group	Control group	Difference (between groups)	t-test, <i>p</i> -value
All participants (<i>n</i>)	78	56		
Pretest (mean ± SD)	76.26 ± 11.86	73.39 ± 16.74		0.274
Posttest (mean ± SD)	81.57 ± 12.49	73.67 ± 19.00		0.008
Mean difference (95% CI)	5.31 (2.61; 8.01)	0.28 (-4.87; 5.43)	5.03 (-0.74; 10.80)	0.087

Group-by-time interaction $F = 3.469$, $p = 0.065$.

VAS scale 0–100 (the higher the rate the more positive assessment).

Table 4: Mean social relations levels and mean difference by group and time; *ps* for *t* tests and repeated measures ANOVA for the subsample of high-intensity program classes ($n = 116$)

Social relations in the class	High-intensity intervention group	Control group	Difference (between groups)	<i>t</i> test, <i>p</i> -value
All participants (<i>n</i>)	60	56		
Pretest (mean ± SD)	74.87 ± 12.64	73.39 ± 16.74		0.590
Posttest (mean ± SD)	81.76 ± 13.22	73.67 ± 19.00		0.010
Mean difference (95% CI)	6.89 (3.75; 10.03)	0.28 (-4.87; 5.43)	6.61 (0.73; 12.48)	0.031

Group-by-time interaction $F = 6.607$, $p = 0.011$.

between groups factor and pretest–posttest interval as the repeated measures factor. The Greenhouse–Geisser correction was used to correct for the violation of the assumption of sphericity (Kogos, 2000).

Bullying and victimization were dichotomized to ‘bully/victimized at least once’ or ‘never bully/never victimized’. Categorical data of bullying experiences were analyzed using the χ^2 test to test differences between groups from pretest to posttest. The examination of predictors for bullying and victimization was conducted with logistic regression analyses. The level of statistical significance was set at $p < 0.05$ and $p < 0.10$ was interpreted as approaching statistical significance.

RESULTS

Social relationships in the class room

The pretest scores for the intervention and control groups were not statistically different. Table 3 presents the constructs measured, sample sizes, means and standard deviations for pretest and posttest separately in intervention and control groups. The mean difference, 95% confidence and *p*-values also are shown. Gender, class, family type or parent’s education

were not associated with the students’ ratings of social relationships in the class room.

The intervention group showed significant improvement (paired samples’ *t* test, $p < 0.001$) in the social relationships in the classroom with an increase of 5.31 units in the total score level. The control group showed a minimal increase of 0.28 units ($p = 0.913$). The effect of group-by-time interaction approached the statistical significance ($p = 0.065$). Table 3 presents the mean scores, *t* test and *F* test parameters for group-by-time interaction.

The effects of the high-intensity intervention were studied among three of the classes ($n = 60$) that provided at least one exposure per month during the school year. Table 4 presents the comparable parameters for high-intensity program group vs. control group. The effect of group-by-time interaction was statistically significant ($p = 0.011$).

Bullying and victimization

Before the program, the frequency of self-reported bullying in the intervention group was 39.7% and in the control group 30.2%. In the posttest bullying in the intervention group decreased 5.9% units to 33.8%, whereas it decreased 1.6% in the control group. The differences between groups were not statistically

Table 5: Self-reported bullying in the intervention and control groups (%)

Bullying others	Bully at least once	
	Pretest*	Posttest**
Intervention school, <i>n</i> = 78	39.7	33.8
Control school, <i>n</i> = 56	30.2	28.6
Total, <i>N</i> = 134	35.6	31.4

χ^2 test, **p* = 0.278, ***p* = 0.531.

Table 6: Victimization perceived by students in the intervention and control groups (%)

Victimization	Victimized at least once	
	Pretest*	Posttest**
Intervention school, <i>n</i> = 78	58.8	38.1
Control school, <i>n</i> = 56	37.7	39.3
Total, <i>N</i> = 134	49.6	38.6

χ^2 test, **p* = 0.021, ***p* = 0.885.

significant at pretest and at posttest (Table 5). Boys were more frequently bullies than girls both at pretest ($p < 0.001$) and posttest ($p = 0.013$) in the intervention group. In contrast, no difference between gender groups occurred at pretest ($p = 0.454$) and posttest ($p = 0.397$) in the control group. Grade, family type or parent's education were not associated with bullying. Logistic regression, controlling for gender and bullying at pretest, indicated no significant impact of intervention on bullying at posttest ($p = 0.974$). The results did not change when the low-intensity class was eliminated from the analysis.

Prior to the program, 58.8% of the pupils of the intervention group and 37.7% of the control group reported to have been bullied at least once during the last school year. The difference at pretest between the groups was statistically significant ($p = 0.021$). After the program, the frequency of self-reported victimization was decreased 20.7 percent units, to 38.1% in the intervention group and increased 1.6 percent units, to 39.3% in the control group ($p = 0.885$). (Table 6) Gender, family type or parent's education was not associated with victimization. Grade was not related to victimization at pretest ($p = 0.529$), whereas students from the 4th grade reported to be more frequently bullied at posttest ($p < 0.001$). Victimization at

the posttest assessment period was not predicted by intervention ($p = 0.149$) when controlling for grade and victimization at pretest. The results did not change when the low-intensity class was eliminated from the analysis.

DISCUSSION

The first objective of the study was to evaluate the effects of a school-based drama program on the social relationships in the class room. To our knowledge, there are few studies focusing on the effects of drama interventions on school social relationships. Our results suggest that a drama program may enhance social relationships between students and the students and the teacher.

The second objective of the study was to determine whether the drama program had an impact on the student's bullying and victimization experiences. The statistically significant effect of the program on bullying behavior was not found, although the victimization substantially decreased in the intervention group. One explanation for that is the lack of statistical power. Our results are, however, in line with those reported by O'Toole and Burton (O'Toole and Burton, 2005) who used drama to assist students to understand the nature, causes and dynamics of bullying, in order to give them the tools to take control of their own conflicts. However, a systematic review of school-based interventions to prevent bullying (Vreeman and Carroll, 2007) showed that interventions based on the social cognitive principles for solely behavior change are not sufficient to combat bullying effectively. This review suggests that social skills group interventions, which fail to address the systemic issues and social environment related to bullying, undermines success. The chance of success appears greater if the intervention incorporates a whole-school approach involving the whole school community (Vreeman and Carroll, 2007).

The third objective of the study was to determine whether the program intensity, i.e. greater number of exposures to the intervention, influenced the outcome in terms of improved social relationships and decreased bullying experiences. The effect of the drama program on social relationships was found to be statistically significant in the high-intensity intervention classes (min 9 exposures) but not in the

low-intensity intervention class. In a meta-review, Nation *et al.* (Nation *et al.*, 2003) identified that one characteristic of an effective program was sufficient dosage, i.e. program intensity which was supported by this study as well.

The Visual Analogue Scale used in the study appeared to be both sensitive and feasible. The measures were sensitive to indicate the tendency of change, although the statistical significance was not always reached. This also encourages us to conduct a further study with a larger sample. The VAS approach has been universally used in measuring pain among children (e.g. Uman *et al.*, 2008). Few studies have reported utilizing VAS scale in health promotion purposes; however, Kalichman *et al.* (Kalichman *et al.*, 2005) developed and used a VAS scale for successful assessment of self-efficacy for medication adherence among low-literacy patients.

The study has a number of strengths. It is a longitudinal rather than a cross-sectional study. The students were the same at pretest and at posttest which made it possible to evaluate the changes at the individual and classroom level. Additionally, the intervention group and control group were similar in terms of socio-demographics which confirm the validity of the results. A further strength of the study is that it used a controlled study design. There is a lack of controlled trials in the field of applied drama and theater. A recent systematic review (Joronen *et al.*, 2008) on school-based drama programs' effects on health promotion of children revealed that most drama studies including control groups are performed in North America. This study contributes to the basic knowledge of effectiveness of drama programs from the European perspective. The program was performed with ordinary school staff in a routine school setting, i.e. it requires some extra resources, such as the time used to plan the drama sessions with teachers and e.g. school nurses.

Previous studies (e.g. Laakso, 2010) suggest that the use of classroom drama should be continuous and long-lasting. Once teachers and students learn the methods of drama, they can benefit more from the content. The primary teacher education and public health nurse education could be a suitable forum for providing basic drama pedagogy education. Education of primary teachers and public health nurses could

be a suitable forum for providing basic drama pedagogical education.

Limitations

Matching strategies may not be able to control all relevant characteristics of the sample. For instance, the intervention school was willing to take part in the program, whereas the control school may or may not have been chosen to do so. The intervention group may thus have been more willing to engage in social health promotion. Furthermore, unusual event or unmeasured environmental characteristic may impact the results.

Although a RCT remains the strongest test of effectiveness, a matched design is superior to having no control group. Furthermore, the generalizability of the results of this study is limited by the small sample size and the homogenous population. Further investigation is needed to study fully the intervention's effectiveness. Additionally, follow-up studies are vital to detect the long-term effects.

Furthermore, the measure of bullying was very general and focuses on behavioral change. It might have been useful to use measures about student's attitude or self-efficacy [see (Vreeman and Carroll, 2007)].

CONCLUSIONS

The study resulted in social relationships improvements and decrease in the number of bully-victims. Future studies should be of sufficient duration to enable changes in social relationships to be noticed.

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