

## Short Report

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# School-based Prevention of Bullying and Relational Aggression: The fairplayer.manual

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The fairplayer.manual is a manualized, school-based intervention program to prevent bullying and relational aggression. We present first results from an evaluation study conducted in Berlin (Germany) with 119 students (age 14-17) from a comprehensive school using a controlled pre-/post-/follow-up design. Utilizing standardized questionnaires we found a significant and practically relevant decrease in bullying behavior and in peer and teacher reported relational aggression in the intervention group after the fairplayer.manual was implemented.

*Keywords:* bullying, prevention, school, relational aggression, adolescence

### Introduction

Bullying includes long-term repeated physical, relational or verbal victimization with an imbalance of power between the bully(ies) and the victim(s) (Olweus, 1994). Relational aggression refers to harmful behaviours (e.g. social exclusion, gossip) which destroy or threaten to destroy social relationships (Crick & Grotpeter, 1995). Bullying as well as relational aggression are highly prevalent in everyday life of many adolescents and related to far-reaching negative outcomes such as lower academic performance and emotional, psychological, and physical health problems (cf. Scheithauer, Hayer, & Petermann, 2003). Thus, effective and immediate preventive intervention programs are needed.

Although a multitude of school anti-bullying programs have been developed and implemented in Europe, there is still a lack of appropriate preventive interventions for relational aggression (Ostrov et al., 2008). Meta-analyses (Ferguson et al., 2007; Merrell et al., 2008) revealed that anti-bullying programs produce small, positive and statistically significant, but in sum not practically relevant effects, even though they have some meaningful positive effects on bullying behavior. Additionally, Ryan and Smith (2009) report a great variety in outcomes of bullying prevention programs and shortcomings in their evaluation, such as the use of only one type of informant or outcome measure, which decreases the confidence in findings because it only partially depicts bully and/or victim problems.

The fairplayer.manual (Scheithauer & Bull, 2008) is a manualized intervention program developed to prevent bullying and relational aggression in the school context and to enhance social and moral competencies, targeting 7<sup>th</sup> to 9<sup>th</sup> graders and their teachers. The program is based on cognitive-behavioural methods, methods which focus on participant roles within bullying episodes (cf. Salmivalli, 1999), and moral dilemma discussions, amongst others. Following training, teachers implement the fairplayer.manual (one 90 min session per week over a period of 15-17 weeks) together with psychologists trained by the developers.

The purpose of this short report is to present first preliminary findings from an evaluation study. The following hypotheses were tested: fairplayer.manual participation leads to a decrease in (1) self-reported bullying and victimization, and (2) relational aggression, assessed by teacher and peer ratings.

## Method

### *Sample and Design*

Data were collected in a pre-/post-/follow-up (t1, t2, t3) design (t2 four months after t1, t3 another 12 months later). 119 students (64 girls, 55 boys; convenience sample) from a comprehensive school in Berlin, Germany, participated (age 14-17, mean=15.13, SD=.74). 43 students attended the long term intervention (IG<sub>long</sub>, 10 weeks of treatment .manual participation), 41 the short term intervention (IG<sub>short</sub>, 10 weeks of treatment between t1 and t2). 35 students received no treatment (control group). The drop-out rate was 7% (leaving school, absence of participants at t2 or t3).<sup>1</sup>

### *Instruments and Procedures*

Data were collected with informed consent by a team of psychologists and analyzed anonymously. Bullying was assessed with a German short version of the Bully/Victim Questionnaire by Olweus (BVQ, partly revised version; Olweus, 1997) with an introductory part providing the definition of bullying. Details on the psychometric properties of the German version are reported by Spiel and Atria (2002). A dichotomous classification for “bully” and “victim” status was obtained by using a cut-off of “bullied others” or “were bullied” at least “two or three times a month”. The outcome classification is not treated disjunctively, because a student can be categorized separately as a bully and a victim.

Peer and teacher reports of relational aggression were assessed using a German translation (translated, translated back, and checked by native speakers) of the Children’s Social Behavior Scale (CSBS; Crick & Grotpeter, 1995; range: 1-5; Cronbach’s  $\alpha$ : peer reports,  $.88 \leq \alpha \leq .95$ ; teacher reports,  $.92 \leq \alpha \leq .95$ ).

### *Data Analyses*

To investigate our first hypothesis, two separate multinomial logistic regression analyses were performed to predict group membership (with control group as referred

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<sup>1</sup> Additional exclusions from analysis due to missing data: 2 participants for BVQ; 23 (19%) for longitudinal analyses of CSBS teacher ratings; 54 (45%) for longitudinal analyses of CSBS peer ratings. Only the latter differed significantly from not excluded participants (were rated less relational aggressive by teachers).

baseline) by bully and victim status, respectively, at t3 while controlling for status at t1. Treating the BVQ as an ordinal scale three non-parametric Friedman's ANOVA with Wilcoxon signed-rank tests as post hoc analyses over time were conducted to analyze the frequency of bullying and victimization. In order to test our second hypothesis two separate one-way repeated-measures ANOVAs were conducted with teacher and peer reports as dependent variables and group as between subject factor (cf. Field, 2005).

## Results

At t1, 8.8% to 22.5% of the students within intervention and control groups were categorized as victims, and 10% to 11.8% as bullies based on their self report (see Table 1). The total number of self reported victims and bullies decreased or did not change meaningfully for both intervention groups, but increased in the control group.

Table 1. Number of Victims and Bullies (Self Report) in Intervention and Control Groups.

	t1 n (%)	t2 n (%)	t3 n (%)
<b>Victims</b>			
IG <sub>long</sub> (N=43)	5 (11.6)	5 (11.6)	5 (11.6)
IG <sub>short</sub> (N=40)	9 (22.5)	6 (15.0)	3 (7.5)
Control Group (N=34)	3 (8.8)	5 (14.7)	7 (20.6)
<b>Bullies</b>			
IG <sub>long</sub> (N=43)	5 (11.6)	2 (4.7)	4 (9.3)
IG <sub>short</sub> (N=40)	4 (10.0)	3 (7.5)	5 (12.5)
Control Group (N=34)	4 (11.8)	5 (14.7)	7 (20.6)

Annotations: N = 117; <sup>1</sup> Percentage of victims or bullies in each group

As no differences emerged with regard to gender, age, or school class, these variables were not considered in the multinomial logistic regression analysis using forced entry method. We found no significant change for self-reported bullying, but a significant decrease for self-reported victimization in the IG<sub>short</sub> emerged (OR=7.86; CI<sub>95%</sub> [1.33 - 46.29];  $p < .05$ ) (see Table 2). At t1 the odds of a child being victimized in the IG<sub>short</sub> were 7.14 times (1/.14=7.14) higher than in the control group but at t3 the odds of a child in the IG<sub>short</sub> not being victimized were 7.86 times higher than in the control group.

Using Friedman's ANOVA we found that the frequency of bullying itself significantly decreased only in the intervention groups over all three measurement waves (IG<sub>long</sub>:  $\chi^2_{(2)} = 7.75, p < .05$ ; IG<sub>short</sub>:  $\chi^2_{(2)} = 8.07, p < .05$ ). The frequency of being bullied significantly decreased only in the IG<sub>short</sub> ( $\chi^2_{(2)} = 6.93, p < .05$ ). Wilcoxon signed-rank tests as post-hoc analyses<sup>2</sup> revealed that the frequency of being bullied significantly declined in the IG<sub>short</sub> from t1 to t3 ( $T = 57, r = -.25$ ). The frequency of self-reported bullying behavior

significantly declined in both intervention groups from t1 to t2 ( $IG_{long}$ :  $T=51$ ,  $r=-.25$ ;  $IG_{short}$ :  $T=65$ ,  $r=-.21$ ). No further significant change could be found between t2 and t3. Overall, these findings support our first hypothesis.

**Table 2.** Multinomial Logistic Regression Analysis Predicting Group Membership ( $IG_{long}$ ,  $IG_{short}$ , Control Group) by Victim Status at t3 while Controlling for Victim Status at t1.

Groups <sup>1</sup>	Predictors	B	(SE)	95% CI for exp b		
				Lower	exp b	Upper
$IG_{long}$	Constant	0.14	(0.79)			
	Victim Status <sup>2</sup> at t1	-0.81	(0.88)	0.08	0.45	2.48
	Victim Status <sup>2</sup> at t3	0.97	(0.72)	0.64	2.64	10.87
$IG_{short}$	Constant	0.05	(0.83)			
	Victim Status <sup>2</sup> at t1	-1.96*	(0.88)	0.02	0.14	0.79
	Victim Status <sup>2</sup> at t3	2.06*	(0.90)	1.33	7.86	46.29

Annotations:  $R^2=.08$  (Cox & Snell),  $.09$  (Nagelkerke). Model  $\chi^2_{(4)}=9.42$ ,  $p<.05$ .  $N=117$ , \*  $p<.05$ , <sup>1</sup> Reference group=control group, <sup>2</sup> Victim status was dummy coded (0=„no victim“; 1=„victim“)

All effects concerning relational aggression were independent of gender, age, and school class. Teacher and peer reports correlated modestly ( $r_{t1}=.47$ ,  $r_{t2}=.41$ ,  $r_{t3}=.27$ , all  $ps<.05$ ,  $N=119$ ). We found a significant interaction effect between group and time ( $F_{(3,717,172,828)}=3.64$ ,  $p<.01$ )<sup>3</sup> for teacher reported relational aggression. Post hoc analyses with Bonferroni corrected paired t-tests<sup>4</sup> revealed that levels of relational aggression were significantly lower at t2 than at t1 for the  $IG_{long}$  ( $t_{42}=4.52$ ,  $p<.0083$ ,  $r=.57$ ) and that these lower levels were sustained until t3. For the  $IG_{short}$  we found a significant decrease from t1 to t2 ( $t_{40}=3.17$ ,  $p<.0083$ ,  $r=.45$ ) and a significant increase from t2 to t3 ( $t_{27}=-4.18$ ,  $p<.0083$ ,  $r=.63$ ). No meaningful change was revealed for the control group. Finally, we also found a significant interaction effect between group and time ( $F_{(4,124)}=3.38$ ,  $p<.05$ ) with regard to peer reported relational aggression. Post-hoc analyses revealed a significant decrease from t1 to t2 in both intervention groups ( $IG_{long}$ :  $t_{27}=2.59$ ,  $p$  (one-tailed) $<.0083$ ,  $r=.44$ ;  $IG_{short}$ :  $t_{21}=3.27$ ,  $p$  (one-tailed) $<.0083$ ,  $r=.58$ ) but no significant change for the control group. No further significant change emerged from t2 to t3 for any group. Thus, the present study confirmed our second hypothesis.

## Conclusions

The preliminary findings reported here show some evidence of the effectiveness of the fairplayer.manual to reduce and prevent bullying and relational aggression

<sup>2</sup> Bonferroni corrected critical  $p$ -value:  $.0167$ .

<sup>3</sup> df corrected using Greenhouse-Geisser estimates of sphericity.

<sup>4</sup> Critical  $p$ -value:  $.0083$ .

among students. We found a decrease of bullying behavior in the intervention groups with an effect size ( $r \geq .21$ ) of practical value. The frequency of self-reported bullying behavior significantly declined in both intervention groups from t1 to t2, which can be interpreted as a stable long term effect in the reduction of bullying in the intervention groups because no further significant change could be found between t2 and t3. The number of bullies and victims decreased or remained constant within the intervention groups, but increased in the control group over time, with a significant effect for victimization. Bullying often serves children as an effective strategy to rise in the social hierarchy. It is therefore extremely hard to convince bullies to give up what they perceive as a—often “rewarded”—dominant role. Working with the methods of the fairplayer.manual, however, seems to discourage imitation of bullying behaviors by other adolescents while also providing help for victims of bullying.

A crucial point for preventive interventions is to incorporate methods considering the participant roles during bullying episodes because bullying may be seen as a phenomenon with underlying group dynamics (cf. Salmivalli, 1999). The fairplayer.manual incorporates methods which focus on participant roles within bullying episodes. Additionally, the fairplayer.manual focuses on all students within a school class—not just on bullies and victims.

We assume an immediate effect of the program, which still persists a year after program implementation, because we found a decrease in relational aggression between t1 and t2 ( $r \geq .44$ ) but no significant change beyond that in the  $IG_{long}$ . Both intervention groups received the program under the same circumstances with the exception of the differing number of training sessions over time. This difference in amount of training sessions may explain the unexpected increase in relational aggression in the  $IG_{short}$  at t3. Even though this increase was only found in teacher reports—this discrepancy, which resulted in a lower correlation between peer and teacher reports at t3 should be investigated in further studies—we suggest that the short implementation time of 10 weeks is not sufficient to achieve a long term effect on such a “covert behavior” as relational aggression. This leads to the conclusion that the long version of the fairplayer.manual needs to be implemented to achieve its best results. Further studies with representative samples have to be conducted to corroborate these preliminary findings.

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Received: June 2009 - Revision received: July 2009 - Accepted: July 2009