



A Review of Aggressive Behavior Intervention Outcome Research



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Abstract

Research on the general effectiveness of school-based behavioral interventions targeting overt, physically aggressive behavior will be synthesized using meta-analysis. An overall effect size (ES) will be calculated to estimate the relative change in aggressive behavior. This effect size will represent either the change from pretest to post-test or the mean difference between treatment and control groups across all included studies. Additional ESs comparing study characteristics (e.g., behavioral vs. cognitive-behavioral, group vs. individual, targeted vs. indicated) may also be calculated if enough studies are retrieved. Previous meta-analyses of outcome research in aggressive behavior have indicated that interventions are generally effective (Hahn et al., 2007; Park-Higgerson, Perumean-Chaney, Bartolucci, Grimley, & Singh, 2008; Wilson, Lipsey, & Derzon, 2003; Wilson & Lipsey, 2007). Implications of this study may involve the characteristics of effective behavioral interventions as well as the possible differences between interventions represented in research and those more typical of school practice (Forman & Burke, 2008; Wilson & Lipsey, 2007).

Research Questions

1. What research is available regarding the outcomes of school-based interventions on aggressive behavior?
2. What is the overall effect of these interventions?
 - a. Universal vs. targeted?
 - b. Manualized vs. unstructured?
 - c. Individual vs. group delivery?
 - d. Target aggression vs. other behavior?
 - e. Fidelity checks vs. no fidelity checks?
3. To what extent are "effectiveness" or "routine" programs represented in the literature?
 - As noted by Forman and Burke (2008) and Wilson and Lipsey (2007), most outcome studies report interventions which were implemented either by trained researchers or under their direct supervision. However, these types of studies are not representative of what is routinely practiced in the schools.

Introduction

Violent and aggressive behaviors among schoolchildren are significant public health issues. For the student aggressors, these behaviors are associated with poorer academic and social outcomes (Barnes, Smith, & Miller, 2014), as well as increased risk for antisocial and criminal behaviors persisting into adulthood (Bradshaw, Schaeffer, Petras, & Jalongo, 2010; Schaeffer et al., 2006). For the targets of these behaviors, there is also an association with poorer academic outcomes, and the students are more likely to report not enjoying school (Kochenderfer & Ladd, 1996).

For teachers addressing violent and aggressive behaviors, using behavioral management techniques necessarily detracts from instructional time (Wilson & Lipsey, 2003). For administrators and other school professionals, providing educational services to students engaging in violent or aggressive behaviors often also represent a significant demand upon the resources of a school.

Evidence-based practice, such as the services provided through behavioral intervention, requires that school practitioners use the most current research to inform their decisions. Research and program evaluation is, appropriately enough, recognized by NASP as one of the foundations of school psychologists' service delivery (NASP, 2010). This requires that a practitioner is not only knowledgeable in the implementation of interventions and programs but also their impact. That is, research evaluation of interventions is concerned with both its processes and outcomes. It is important that the methods used in addressing these behaviors are chosen from an established research base, and that resources are allocated appropriately to support these students.

Meta-analysis is a technique used to systematically review the research literature. It has been several years since a meta-analysis of school-based interventions has been conducted which focuses specifically on overt physical aggression, and it is, therefore, appropriate for an update to be conducted.

Proposed Method

Literature Retrieval.

Articles will be retrieved from electronic databases (i.e., PsycINFO, Education Resources Information Center [ERIC], Medical Literature Analysis and Retrieval Online [MEDLINE], and the National Criminal Justice Reference Service. Articles will also be retrieved through a hand search of *School Psychology Review*, *Journal of Educational and Psychological Consultation*, *Journal of Behavior Assessment and Intervention in Children*, and *Journal of Positive Behavior Interventions*. Additional articles may also be identified by searching the references of previous meta-analyses. Finally, articles may be identified by searching the references of studies which have already been retrieved.

Inclusion Criteria.

- Published since 2004 – this will reduce the overlap with previous meta-analyses regarding aggressive behavior.
- Published in English
- Includes a dependent measure of overt physical aggression – other measures of aggression (e.g., social, verbal, relational, bullying) or related cognitive measures (e.g., attitudes toward aggressive behavior or individuals, normative beliefs about aggression) may be included if overt physical aggression is also reported.
- Intervention is school-based and delivered to elementary-aged students – the sample may also include students at secondary school, but outcomes for elementary students must be reported separately.
- Pretest/posttest or experimental design (e.g., intervention vs. control, intervention comparison) – to allow for calculation of effect size.

Effect Size.

The effect size used in the analyses will be the standardized mean change (i.e., Cohen's d):

$$d_{ij} = \frac{\bar{Y}_{ij} - \bar{X}_{ij}}{S_{ij}}$$

where \bar{X}_{ij} is the group pretest mean (or control group mean), \bar{Y}_{ij} is the group posttest mean (or intervention group mean), and S_{ij} is the pooled standard deviation for Group j in Study i (or the pooled standard deviation between experimental groups).

Study Characteristics.

Studies included in the meta-analysis will also be coded based on several study characteristics, including:

- Subject characteristics – gender, ethnicity, age of participants, and risk level
- Program/intervention characteristics – effectiveness vs. efficacy, duration, frequency, total hours of contact, format (e.g., group, one-on-one), intensity (e.g., universal, selected, indicated), delivery personnel, and treatment fidelity
- Method characteristics – study design, attrition, and source of dependent measure (e.g., direct observation, rating scale, peer nomination)

Potential Implications

Lists of specific interventions and programs which are "evidence-based" can help provide some guidance to schools in selecting interventions that may be most helpful in their setting. However, research of this kind is limited to individual programs, and each program typically has only a few studies investigating its outcomes.

In comparison, meta-analysis offers to extend the literature in a different way. First, the results of this meta-analysis may indicate characteristics of effective, school-based programs on overt physical aggression. That is, this study has the potential to yield evidence about behavioral approaches in general as well as individual programs. Second, it offers to provide a more systematic and comprehensive review of published studies. Third, since many schools already have prevention or intervention programs already in place, these results may help inform schools how to improve these programs or better match them to students for which they are likely to be effective.

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