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Presentation #4

Title: Teacher Classroom Management Practices: Effects on Disruptive or Aggressive Student Behavior

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Abstract Body

Limit 5 pages single spaced.

Background / Context:

Description of prior research and its intellectual context.

Disruptive behavior in schools has been a source of concern for school systems for many years and, in fact, the single most common request for assistance from teachers is related to behavior and classroom management (Rose & Gallup, 2005). Students who are disruptive experience less academic engaged time, tend to have lower grades, and perform worse on standardized tests compared to students in well managed classrooms (Dolan, Kellam, Brown, Werthamer-Larsson, Rebok, Mayer, et al., 1993). Furthermore, teachers' attempts to control disruptive behaviors cost considerable time which often comes at the expense of academic instruction. Without the competence to address disruptive student behavior, teachers find it more challenging to meet the instructional demands of the classroom (Emmer & Stough, 2001).

Effective classroom management is also related to prevention efforts. The progression and malleability of maladaptive behaviors is affected by classroom management practices of teachers in the early grades. For example, Greer-Chase and colleagues found that aggressive students in disruptive classroom environments are more likely to be aggressive in later grades without effective classroom management (Greer-Chase et al.). Research-based approaches to classroom management are necessary to improve both academic and behavioral outcomes for students at-risk for behavior disorders.

Extensive theoretical and empirical bases exist for classroom management practices. In general, classroom management practices historically have been identified by observing effective teachers' behavior or combining behavioral approaches that have been established through research on effective behavior change procedures. Prior research falls into two broad categories: (1) observation studies used to identify how effective teachers organize and manage their classrooms (e.g., Anderson et al., 1979; Kounin, 1970); and (2) experimental studies examining components of classroom management in isolation or in various combinations (e.g., Becker, Madsen, & Arnold, 1967; Madsen, Becker, & Thomas, 1968). Recently, a systematic review of classroom management practices was conducted (Simonsen, Fairbanks, Briesch, Myers, & Sugai, 2008). This evaluation of 81 studies identified 20 general practices that met the criteria for evidence-based. These general practices fell into five broad categories: (1) maximize structure and predictability, (2) post, teach, review, and provide feedback on expectations, (3) actively engage students in observable ways, (4) use a continuum of strategies to acknowledge appropriate behavior, and (5) use a continuum of strategies to respond to inappropriate behavior (Simonsen et al.). The results of this review were an important first step in identifying the evidence base for specific practices typically used in classroom management approaches.

Prior meta-analyses have focused on school-based prevention efforts that reduce problem behavior in schools (i.e., Wilson, Gottfredson, and Najaka, 2001; Wilson & Lipsey, 2006; Wilson, Lipsey, & Derzon, 2003). These meta-analyses were broad in their scope of interventions in the review and included whole-school programs such as social skills packages. A greater understanding of the evidence base for narrowly defined classroom management

practices orchestrated by classroom teachers is necessary to further define the effects of classroom management.

Purpose / Objective / Research Question / Focus of Study:
Description of the focus of the research.

Despite the large research base grounded in behavioral theory for strategies to increase appropriate behavior and prevent or decrease inappropriate behavior in the classroom, a systematic review of multi-component universal classroom management research is necessary to establish the effects of teachers' universal classroom management approaches. This review examines the effects of teachers' universal classroom management practices in reducing disruptive, aggressive, and inappropriate behaviors. The specific research questions addressed are: Do teacher's universal classroom management practices reduce problem behavior in classrooms with students in kindergarten through grade 12? What components make up the most effective and efficient classroom management programs? These questions were addressed through a systematic review of the classroom management literature and a meta-analysis to calculate the magnitude of the effects of classroom management on disruptive or aggressive student behavior. In addition, limitations found in this body of research will be highlighted.

Setting:
Description of the research location.

Eligible studies examined the impact of interventions designed for the whole class for school-aged subjects in either general education or special education classrooms during school hours. Interventions in residential facilities or special schools (e.g. day treatment facilities) were not eligible for inclusion. Studies from any country that met all other eligibility criteria were eligible although the majority was from the U.S.

Population / Participants / Subjects:
Description of the participants in the study: who, how many, key features or characteristics.

The population of participants in the sample was school-aged children in kindergarten through grade 12 or the equivalent formal schooling in countries with different grade structures from the U.S. The approximate ages of the participants ranged from 5-18.

Intervention / Program / Practice:
Description of the intervention, program or practice, including details of administration and duration.

For the purpose of this review, classroom management is defined as a collection of classroom procedures implemented by teachers in classroom settings with all students for the purposes of supporting prosocial behavior and preventing and reducing inappropriate behavior. These procedures are considered universal because they are implemented with the entire class rather than an individual or subgroup requiring additional behavioral support. The classroom management practices reviewed were required to be actions performed by the classroom teacher in the context of the classroom, with the expectation that they would reduce problem behavior for the students in the classroom. Studies that used an intervention with the classroom teacher (e.g., teacher training in classroom management) but still had the teacher as implementer of the

strategies and targeted student problem behavior as an outcome were included in this review. Additional inclusion criteria were:

a) Interventions delivered universally to all subjects. Pull-out or small group interventions (e.g., small group social skills) were not eligible.
b) Interventions that began treatment outside of the classroom in a small group and then transferred it into the classroom were not eligible.
c) Additional treatment components (e.g., parent training) were allowed provided there was at least one outcome variable measuring treatment effects with students in the classroom.

Research Design:

Description of research design (e.g., qualitative case study, quasi-experimental design, secondary analysis, analytic essay, randomized field trial).

A systematic review and meta-analysis of teachers' classroom management practices was used to analyze the data. Meta-analysis methodology was standard based on current practices (Lipsey & Wilson, 2001; Hedges 2007). The methods are described below.

Data Collection and Analysis:

Description of the methods for collecting and analyzing data.

A detailed coding protocol and screening sheet was developed specifying eligibility criteria for inclusion in the analysis. A comprehensive review of the literature was performed and potential studies were identified and screened for inclusion. Each study was coded on 33 variables (e.g., sample size, sampling procedures, dependent variable, duration of treatment). Table 1 shows a summary of study characteristics. (Please insert Table 1 here)

Effect sizes were calculated based on the available data in the study, most typically treatment and comparison group means on posttest data with standard deviations. The standardized mean difference effect size statistic was used to code classroom management effects. In cases where treatment and control group means were not available, effect sizes were estimated based on the available data in the study using procedures described by Lipsey and Wilson (2007). Standard mean effect sizes were adjusted using Hedges small-sample correction to produces an unbiased estimate of effects in small samples (Hedges & Olkin, 1985). Other adjustments were made based on the data presented in each study (e.g., covariate, pretest). Some data was reported at the individual student level while others were reported at the classroom level. Individual student data were adjusted to classroom level using an estimate of the ICC between behavior and classroom outcomes. All effect sizes are coded such that larger effect sizes represent positive outcomes (e.g., less disruptive or aggressive behavior).

Findings / Results:

Description of the main findings with specific details.

The random effects analysis on the 12 effect sizes produced a statistically significant mean classroom effect size of 0.80 (SE = 0.15, z = 5.44, p = .000) for ICC=.05 and a statistically significant mean classroom effect size of .71 (SE = .13, z = 5.53, p = 0.00) for ICC=.10 indicating that the participants in the classroom management intervention conditions exhibited

significantly less problem classroom behavior after intervention. Figure 1 shows the forest plot of the effect sizes using ICC=.05 and Figure 2 shows the forest plot of the effect sizes using ICC=.10. The sample of effect sizes ranged from -0.05 to 1.74 (ICC=.05) and from -.03 to 1.56 (ICC=.10) showing an overall positive effect for teachers' classroom management practices. Additional analyses were conducted on the sample of effect sizes to determine if the sample was biased or if the sample was pulled from the same population of effect sizes.

The test for homogeneity was not statistically significant for ICC=.05 (Q= 13.72, df = 11, p = .25) or for ICC=.10 (Q= 10.67, df = 11, p = .47) and therefore failed to reject the hypothesis that the sample of effect sizes are homogeneous (i.e., any variability is likely due to sampling error). Therefore there was not enough variability between studies to justify further analysis to examine potential moderators.

Because of the large number of studies using a specific manualized program (N = 7; Classroom Organization and management Program; COMP) a posthoc test was conducted to compare COMP and non-COMP studies. An inverse variance weighted analysis using a $Q_{between}$ was conducted to compare differences in mean effect sizes between COMP studies and the others. The statistically significant mean effect size for studies categorized as "other" was ES=.88 (p = .00) using ICC=.05 and ES=.66 (p = 00) using ICC=.10. COMP studies produced a statistically significant effect size ES=.75 (p =.00) (see Table 2). Based on the random effects analysis, differences between mean effect sizes were not statistically significant for either ICC=.05 ($Q_{between}$ = .38, df = 1, p = .54) or ICC=.10 ($Q_{between}$ = .07, df = 1, p = .54). These results indicate that on average, there is no difference in effect sizes between studies using COMP and studies using other forms of classroom management. (Please insert Table 2 here)

Conclusions:

Description of conclusions, recommendations, and limitations based on findings.

Whole-classroom, multi-component programs for classroom management have a significant, positive effect on decreasing problem behavior in the classroom. Students in the treatment classrooms in all 12 studies showed less disruptive, inappropriate, and aggressive behavior in the classroom compared to untreated students in the control classrooms where "treatment as usual" or typical classroom management practices were occurring. The overall mean classroom effect size of either .71 or .80 indicates a positive effect that significantly impacts the classroom environment. Teachers who use universal classroom management approaches can expect to experience improvements in student behavior, improvements that establish the context for effective instructional practices to occur.

The analysis of the effect sizes did not indicate a significant difference between effects sizes, indicating they were drawn from the same hypothetical distribution. Said another way, this means there were no systematic differences in the way the studies were conducted such as duration of treatment, assignment procedures, or population that may account for differences in effect sizes. Likewise, treatment characteristics did not have a significant impact on the overall mean classroom effect size, and there was no statistically significant difference between studies using COMP or other classroom management packages. Results will be discussed in terms of the

limitations of study features reported (e.g., treatment fidelity) and implications for research and practice.

Appendices

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Appendix A. References

References are to be in APA version 6 format.

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Appendix B. Tables and Figures

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Table 1

Characteristics of Included Studies (n = 12)

Characteristic	N	%	Characteristic	N	%
Publication Year			***Grades of Participants***		
1980s	2	17	K-12	1	8
1990s	9	75	K-6 (+resource)	8	67
2000s	1	8	K-9	1	8
			6-12	2	17
Form of Publication			***Location of Treatment***		
Published (peer review)	5	42	Regular classroom	8	67
Technical report	7	58	Both regular and special	4	33
Country of Study			***Treatment Agent***		
United States	11	92	Regular education teacher	8	67
Netherlands	1	8	Both regular and special	4	33
Group Assignment			***Duration of Treatment***		
Random (individual)	7	58	1-10 weeks	1	8
Random (group)	4	33	11-20 weeks	1	8
Nonrandom	1	8	21-50 weeks	8	67
			>50 weeks	2	17
Sample Size (Tx + Control)					
< 10	1	8	***Treatment Components***		
10 - 20	2	16	Teacher training in COMP	7	58
21 - 30	8	67	Good Behavior Game	2	17
31	1	8	Multi-component	3	24
School Setting			***Additional Treatment Components***		
Public	10	84	Parent training	2	17
Public and Private	2	16	School structure changes	1	8
			Academic	1	8
			None	8	67
School Neighborhood					
Urban	1	8			
Mix (urban, suburban, rural)	10	84			
Unknown	1	8			

Note. T*x* = Treatment; COMP = Classroom Organization and Management Program.

Table 2
Results of Effect Size Weighted Moderator Analysis for Treatment Characteristic

Variable	M Classroom ES	SE	95% CI LL	95% CI UL	z	p
Other	.88 (ICC=.05)	.29	.22	.41	6.36	.00
Other	.66 (ICC=.10)	.22	.23	1.10	3.01	.00
COMP	.75	.18	.40	1.10	4.23	.00

Note. COMP = Classroom Organization and Management Program; ES = effect size; ICC = intraclass correlation; CI = confidence interval; LL = lower limit; UL = upper limit.

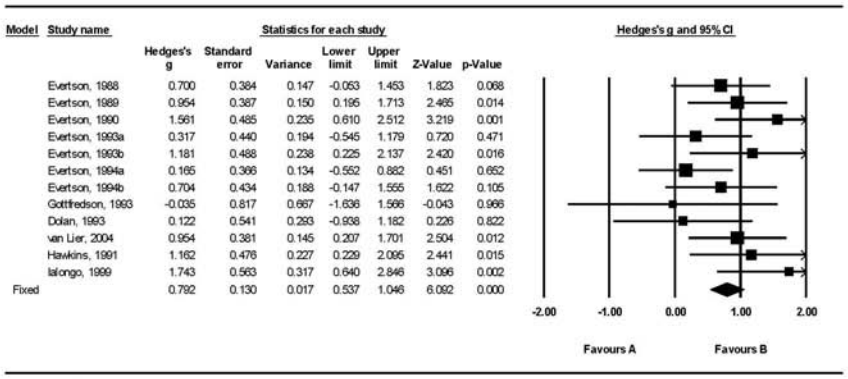

Figure 1. Forest plot for the effects of classroom management on disruptive or aggressive student behavior (ICC = .05). Homogeneity Analysis: $Q = 13.72$, df = 11, p = .25, and $I^2 = 19.83$

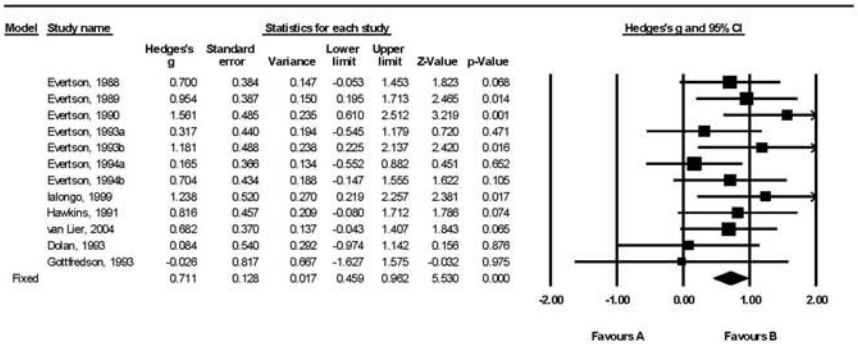

Figure 2. Forest plot for the effects of classroom management on disruptive or aggressive student behavior (ICC = .10). Homogeneity Analysis: $Q = 10.67$, df = 11, p = .47, and $I^2 = 0.00$