



NEBRASKA CENTER FOR RESEARCH
CHILDREN, YOUTH, FAMILIES & SCHOOLS

CYFS Working Paper 2012-3

The Effect of Teacher's Invitations to Parental Involvement on Children's Externalizing Problem Behaviors: An Examination of a CBC Intervention¹

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November 2012

¹Development of this report was completed at the Nebraska Center for Research on Children, Youth, Families and Schools (CYFS) and funded by a grant from the U.S. Department of Education's Institute of Educational Sciences (R305F050284). The poster was presented originally by the authors at the 2010 annual meeting of the American Psychological Association. The statements made herein are those of the developers and are not meant to represent opinions or policies of the funding agency.



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Recommended citation:

Coutts, M. J., Sheridan, S. M., Kwon, K., & Semke, C. A. (2012). The effect of teacher's invitations to parental involvement on children's externalizing problem behaviors: An examination of a CBC intervention (CYFS Working Paper No. 2012-3). Retrieved from the Nebraska Center for Research on Children, Youth, Families and Schools website: cyfs.unl.edu

Introduction

Behavioral Problems in Childhood

- Behavioral problems in childhood are associated with academic difficulties including in-school suspensions (Reinke, Herman, Petras, & Ialongo, 2008), high school dropout (Vitaro, Brendgen, Larose, & Tremblay, 2005), and low academic grades and achievement scores (Bub, McCartney, & Willett, 2007; Lopes, 2007).
- Students with disruptive behavior problems demonstrate higher rates of social risk factors than their nondisruptive peers, including school maladjustment, antisocial activity, substance use, sexual activity (Schofield, Bierman, Heinrichs, & Nix, 2008), and conduct problems (Reinke et al., 2008).
- Given the relationship between children's disruptive behaviors and negative outcomes, it is important to identify effective interventions that can help to ameliorate disruptive behavior problems.
- Systemic variables within and between home and school settings contribute to the development and manifestation of behavioral problems (Reid, Patterson, & Snyder, 2002); thus, interventions need to involve parents and teachers alike.

Teacher Invitations for Parental Involvement

- Parental involvement in children's education is associated with a variety of positive child outcomes (Barnard, 2004; Domina, 2005; El Nokali, Bachman, & Votruba-Drzal, 2010; Ma, 1999; Marcon, 1999; Miedel & Reynolds, 1999).
- When parents feel that schools are open to and willing to support their involvement, parents are more likely to participate (for a review, see Hoover-Dempsey, Walker, Sandler, Whetsel, Green, Wilkins, & Closson, 2005).
- One important influence on parents feeling welcome in their children's school is teachers' specific invitations to become involved (Anderson & Minke, 2007; Green, Walker, Hoover-Dempsey, & Sandler, 2007).
- Specific teacher invitations to parental involvement can take many forms including encouraging frequent teacher-parent communication about the child, suggesting ideas for practicing school work at home, or promoting home or community activities relevant to the child's learning (Hoover-Dempsey, Walker, Jones & Reed, 2002).
- Although much research has investigated the relationship between teachers' invitations and parents' involvement, little research has examined the moderating role of teachers' invitations on children's outcomes.

Conjoint Behavioral Consultation (CBC; Sheridan & Kratochwill, 2008)

- CBC is a strength-based, indirect model of service delivery wherein parents and teachers collaboratively participate in a joint problem-solving process to promote positive behavioral outcomes for children. It is effective for decreasing children's disruptive behavior problems, enhancing family-school partnerships, and increasing parent participation in educational decision-making (Sheridan et al., 2009).
- Goals of CBC are to: (1) address children's behavioral and learning needs; (b) increase parent engagement in education; and (c) facilitate a positive family-school partnership.
- CBC provides a clear opportunity to *establish communication* and *working partnerships* among family and school systems (Christenson & Sheridan, 2001). Communication between families and schools may be elicited in several ways; e.g., multiple and frequent opportunities for *invitations from the teacher to the parent* for school involvement.
- The role of teacher outreach and invitations within the context of CBC has not been explored, despite the fact that direct and ongoing connections between the teacher and parent are of interest within the CBC model.

Research Question and Hypothesis

- *Purpose:* To examine the relationship between changes in teachers' invitations to parental involvement in response to a CBC intervention and children's behavior.
- *Research Question:* Is the effect of CBC on children's disruptive behavior (i.e., hyperactivity, aggression, conduct problems) moderated by changes in teachers' invitations to parent involvement?
- *Hypothesis:* CBC will have a more positive effect on children's behavioral outcomes relative to a control group when teachers increase their invitations for parental involvement.

Methods

Participants

- 207 kindergarten through 3rd grade students and their parents (n = 207) and teachers (n = 82) from 21 schools in a moderately-sized Midwestern city and surrounding communities (see Table 1).
- Fifty-one percent of CBC and 43% of the control teachers increased in their invitations to parents.
- Participating children were identified by teachers as having concerns related to disruptive behaviors (e.g., aggression, non-compliance).

Table 1. Demographic Characteristics of Participants

	Student	Parent	Teacher
Gender			
Male	78%	10%	3%
Female	22%	90%	97%
Ethnicity			
White, non-Hispanic	69%	87%	100%
African-American	11%	4%	
Other	20%	9%	
Mean (SD) Age	6.45 (1.08)	34.77 (8.04)	NA
Mean (SD) Experience in Years			9.38 (10.06)

Study Design and Data Analysis Plan

- Larger study was a randomized experimental design with assignment to:
 - *Conjoint Behavioral Consultation condition*: A structured, indirect service delivery system involving a behavioral consultant who works with groups of 2-3 family members and teachers; or
 - *Control condition*: School support as typically provided by school personnel, including school psychologists, counselors, and specialists.
- A multi-level modeling technique, taking into account the nested structure of the data (time nested within individuals and individuals nested within teachers) was used to test the moderating effect of teacher invitations to parent involvement on the effect of CBC in decreasing child externalizing problems.
- Models were estimated separately for Hyperactivity, Aggression, and Conduct Problems subscales of the BASC-2. A significant moderating effect was indicated by a significant three-way interaction between time, condition, and change in teacher invitations.

CBC Implementation

- Within each CBC classroom, a consultant met with the teacher and 2-3 parents for approximately 4-5 conjoint consultation sessions over ~8 weeks via 3 stages:
 - *Needs Identification and Needs Analysis (Building on Strengths)* – reviewed student, family, and school strengths; prioritized 1-2 target behaviors per student; identified and defined needs, settings, and goals; conducted functional behavior assessment; discussed information gathering; and selected strategies for change.

- *Plan Development (Planning for Success)* – discussed information collected by parents and teachers about identified behavior(s); developed a plan to address student needs; collected plan materials; discussed ways to support the plan at home and school; and gathered information.
- *Plan Evaluation (Checking and Reconnecting)* – discussed progress made toward goals; evaluated the plan(s); and determined needs for plan continuation and/or changes.

Measures

- *Teacher Report of Invitations to Parental Involvement (TIPI; Hoover-Dempsey, Walker, Jones & Reed, 2002)*: A 16-item, 6-point Likert-type scale assessing teachers' reports of their invitations to parents for involvement during the school year.
 - Change scores from pre- to post-test were calculated for teacher invitations. Positive change refers to 1 SD increase in TIP from pretest-to-post test; negative change refers to 1 SD decrease in TIP from pretest to posttest.
- *Behavior Assessment System for Children, 2nd edition (BASC-2; Reynolds & Kamphaus, 2004)*: A 139-item, 4-point Likert scale measuring emotional and behavioral disorders in children.
 - T score = 50; SD = 10
 - Externalizing Composite: Hyperactivity, Aggression, Conduct Problems

Results

- Means and standard deviations for the study variables are presented in Table 2 by experimental conditions.

Table 2. Means (Standard Deviations) of the Study Variables

	Control		CBC	
	Pre-test	Post-test	Pre-test	Post-test
BASC-2 Hyperactivity	70.02 (9.42)	67.79 (9.79)	68.83 (10.63)	65.14 (11.39)
BASC-2 Aggression	67.72 (13.25)	65.47 (13.23)	64.98 (14.07)	61.80 (13.17)
BASC-2 Conduct Problems	65.46 (11.28)	64.12 (9.77)	62.14 (11.79)	59.31 (11.32)
Teacher Invitation to Parent Involvement	4.00 (.75)	3.88 (.71)	3.79(.74)	3.81 (.78)

- On average, teacher invitation scores did not change from pre-test to post-test for both CBC ($M = .00$, $SD = .65$) and control ($M = -.01$, $SD = .59$) groups; however, the variability in the change scores were of interest for the purpose of this study question.
- Children in the CBC condition whose teachers increased their invitations to parent involvement over the course of CBC were reported to show greater decreases in Aggression and Conduct Problems as compared to children in the control condition.
- Based on two-tail significance tests, three-way interactions were statistically significant for:
 - Aggression: $\gamma = -5.95$; $t(209) = -1.98$; $p < .05$ (Figure 1); and
 - Conduct Problems: $\gamma = -5.12$; $t(176) = -1.71$; $p < .10$ (marginal; Figure 2).
- Three-way interaction was not statistically significant for Hyperactivity: $\gamma = -2.18$; $t(130) = -0.95$; $p > .10$.

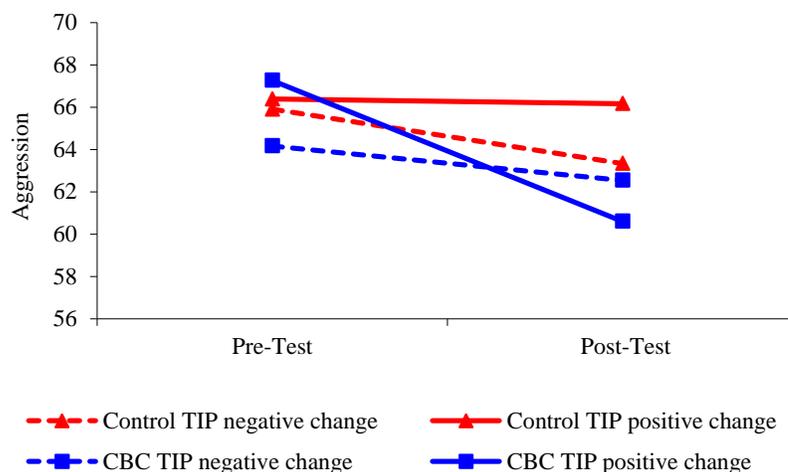


Figure 1. Three-way interaction between time, condition, and change in teacher invitation to parents involvement on aggression.

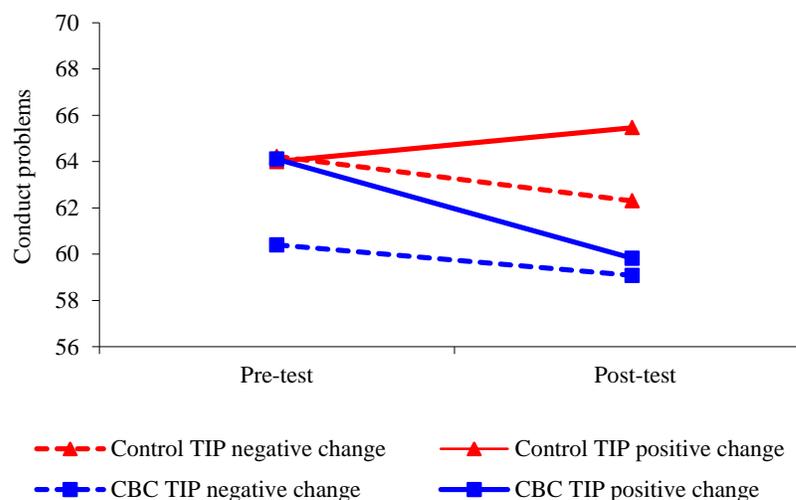


Figure 2. Three-way interaction between time, condition, and change in teacher invitation to parents involvement on conduct problems.

Discussion

General Findings and Interpretations

- This study is the first to investigate the moderating role of teacher invitations to parent involvement on children's behavioral change within the context of CBC. Specifically, it identified the important role of teacher outreach to parents within the CBC intervention.
- Participants in CBC, including teachers, can be involved in several ways. This study demonstrates that effects for certain behaviors are strengthened when teachers increase their active role in reaching out to and inviting involvement from parents.
- Increases in teacher invitations to parents was found to moderate CBC effects on producing decreases in children's aggression ($p < .05$) and conduct problems (marginal; $p < .10$). Relative to children whose teachers decreased invitations to parents, those whose teachers heightened their active outreach to parents within the CBC intervention demonstrated significantly greater improvements in behavior. No interaction between CBC condition, change in teacher invitations, and child outcomes were observed for hyperactivity.
- Previous work (Hoover-Dempsey et al., 2005) has suggested that school personnel take the first step in reaching out to parents. The present study provides empirical support documenting positive child effects under conditions whereby teachers increase their active invitations to parents.

- As a model of intervention facilitated by a third party consultant, the role of teachers within CBC and its influence on child outcomes has not been studied. This study demonstrates the importance of active outreach on the part of teachers to improve certain child outcomes, within a highly interactive process.
- CBC provides a context within which teachers can begin to make active and outward overtures to increase parental involvement. The structured problem solving model, with evidence-based interventions embedded within the process, provides concrete strategies to engage parents, and may provide teachers with tools to structure their invitations.
- Although not studied directly, CBC may influence teachers' views about parent involvement and alter their behaviors vis á vis invitations for increased and ongoing participation. Teacher beliefs and attitudes about parent involvement may be more difficult to change than their behaviors; change in invitation frequency may be the first step toward facilitating positive perceptions.

Limitations and Future Research

- The study relied on self-reports of teacher behaviors related to parental invitations. Direct objective measures of this important variable are necessary.
- Variables other than increased teacher invitations, such as quality of invitations or fit between invitations and perceived need, may moderate the effects of CBC on child outcomes. Future research should investigate additional teacher outreach behaviors more fully.
- This study investigated the role of teacher invitations within CBC on disruptive behaviors in children. This and other teacher variables may operate differently for other child outcomes, such as academic deficits or internalizing concerns. Future research should investigate the interactions among CBC, teacher invitations, and child outcomes that are topographically and functionally distinctive.
- Teacher demographic/intrapersonal characteristics were not taken into account in this investigation. It is possible that teacher variables such as years of experience, level of training, history with parents, and general attitudes and beliefs may contribute to their invitation behaviors, and should be considered in future studies.
- Systemic and contextual variables of the school were not considered in this study. School culture, administrative climate, support for parent involvement, history of parent involvement, match between school and family cultures, and other school-level factors may influence teachers' invitations and should be included in future research.

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