Opening the "Black Box": Family Check-Up intervention effects on self-regulation that prevents growth in problem behavior and substance use

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ABSTRACT

Family–school interventions are a well-established method for preventing and remediating behavior problems in at-risk youth, yet the mechanisms of change underlying their effectiveness are often overlooked or poorly understood. The Family Check-Up (FCU), a school-based, family-centered intervention, has been consistently associated with reductions in youth antisocial behavior, deviant peer group affiliation, and substance use. The purpose of this study was to explore proximal changes in student-level behavior that accounts for links between implementation of the FCU and changes in youth problem behavior. Data were drawn from a randomized controlled trial study of the efficacy of the FCU among 593 ethnically diverse middle school students followed longitudinally from 6th through 8th grades. Latent growth curve analyses revealed that random assignment to the FCU intervention condition was related to increased mean levels of students' self-regulation from 6th to 7th grades, which in turn reduced the risk for growth in antisocial behavior, involvement with deviant peers, and alcohol, tobacco, and marijuana use through the 8th grade. Overall, these findings highlight the robust implications of self-regulation as a proximal target for family-centered interventions.

1. Introduction

Youth antisocial behavior is a significant area of concern from the perspective of students, educators, parents, and society at large (Dishion & Patterson, 2006; Durlak, 1995; Rose & Gallup, 1998). Data collected from the 2011 Centers for Disease Control and Prevention's Youth Risk Behavior Survey revealed that within the month prior to the survey, 16.6% of youth surveyed had carried a weapon, 18.1% had smoked cigarettes, 38.7% had consumed alcohol, 23.1% had used marijuana, and nearly 39.8% of sexually active youth reported engaging in risky sexual practices (Centers for Disease Control, 2011). Developmentally, it is often during the middle school years that antisocial behavior escalates from rule-breaking behaviors, defiance, aggression, lying, and stealing to include more severe behaviors, such as substance use, delinquency, and risky sexual behavior (Dishion & Patterson, 2006; Hiatt & Dishion, 2007). Management of these behaviors in school settings poses an ongoing challenge for teachers and school administrators that can occupy a great deal of their time (Buckingham, Donaldson, & Marnik, 2005) and often results in exclusionary disciplinary practices, such as suspension, which have limited success (Flannery, Frank, & McGrath-Kato, 2012; Skiba & Peterson, 2000). Students who are suspended typically have the lowest academic achievement (Arcia, 2007) and can least

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afford to miss instruction. Exclusionary disciplinary practices may perpetuate problems for students who already have difficulties with aggression, hyperactivity, and social skills, which may lead to increased disciplinary referrals (Maag, 2012). Thus, there is good reason to focus on prevention of problem behaviors as an alternative to this approach.

1.1. The Family Check-Up intervention model

The Family Check-Up (FCU) model developed from the Adolescent Transitions Program (e.g., Dishion & Andrews, 1995) and was adapted for various contexts of implementation, including an early childhood home-visitation intervention model (e.g., Dishion et al., 2008) and a comprehensive, tiered intervention model delivered in public middle schools (Dishion & Kavanagh, 2003); the latter was the focus of the current study. At the universal level of the FCU model, a family resource center is established at the school site and is staffed by a parent consultant trained in the FCU model to provide an infrastructure for collaboration between school and parents, to promote family-centered norms and systems for evidence-based family management strategies, and to facilitate identification and referral of students in need of support services. Family consultants provide general informational and consultation services that are available to all families of children attending the school (e.g., brochures, parenting materials, parenting topics nights, and community resources). Parent consultants also attend behavioral support meetings, teacher meetings, and other relevant school meetings to ensure that family-centered perspectives are represented in school decision-making forums, and, when appropriate, they advocate for the needs of specific families. The family resource center as a universal intervention has been found to prevent escalation of problem behavior in schools (Stormshak, Dishion, Light, & Yasui, 2005).

Another integral part of the FCU model is risk identification and referral for more intensive services. Risk screening in schools or with families may be used to identify students with early signs of risk in emotional, behavioral, or academic domains. At-risk students are then referred for more intensive family support services, referred to as the *selected level* of intervention. At the selected level, families participate in the FCU's three brief family-centered intervention sessions designed to assess family strengths and weaknesses and to motivate parents to improve their parenting practices and engage in intervention services that address the specific needs of their family. These sessions are based on the principles of motivational interviewing and the techniques used in the Drinker's Check-Up (see Miller & Rollnick, 2002). Feedback about assessment results is followed by an opportunity to select intervention options that are tailored to the unique needs of each family and that are grounded in empirically validated family management strategies (Dishion, Stormshak, & Kavanagh, 2011) and school and community resources that can support family change. Therefore, the FCU is an assessment-driven, empirically based conceptualization of family strengths and weaknesses that in turn elicits parent motivation and engagement in change processes. The ultimate goal is to evoke lasting, self-sustained changes for families through brief interventions.

1.1.1. Comparing the Family Check-Up to other school-based prevention models

Several evidence-based interventions are available that target changes in family practices to reduce antisocial behavior and promote academic and social development (see Cox, 2005, and Dusenbury, 2000, for a review). Well-established interventions intended to have an impact on antisocial behavior, peer relations, and substance abuse include evidence-based programs such as Parent Information and Resource Centers (Kalafat, 2004; Kalafat, Illback, & Sanders, 2007), Families and Schools Together (McDonald, Coe-Bradish, Billingham, Dibble, & Rice, 1991), Positive Action (Flay, Allred, & Ordway, 2001), Strengthening Families (Kumpfer, Alvarado, Tait, & Whiteside, 2007), and the Triple P Positive Parenting Program (Sanders, Markie-Dadds, Tully, & Bor, 2000). A summary of key components of each of these models is provided in Appendix A. Although the FCU has conceptual similarities to aspects of these programs, it is different in that it also offers (a) a model derived from core behavioral family management training programs (Dishion, Reid, & Patterson, 1988), (b) a multiple-gating strategy for identifying students at risk and linking them with FCU services, (c) a tiered approach to ensure that the intensity of services matches the level of student and family need, (d) an emphasis on motivational enhancement to facilitate parent engagement and readiness to change, (e) an assessment-driven model for intensive family interventions, (f) an adaptive and tailored approach to intervention delivery that provides only relevant materials to facilitate maximal impact in an efficient framework, and (g) regular follow-up as part of a health-maintenance model (Dishion & Stormshak, 2007; Stormshak & Dishion, 2009).

1.2. Evidence for the effectiveness of the Family Check-Up model

Studies evaluating the effectiveness of the FCU model in public middle schools have largely been drawn from two randomized controlled trials. In the first trial, approximately 1000 students and their families were followed from 6th grade through high school, and data have continued to be collected into early adulthood. The second trial, which expanded on the original trial, used a similar design to examine its effectiveness with ethnic minority families and followed youth and their families from 6th through 10th grades. Both trials were conducted with families of considerable ethnic diversity who resided in a mid-sized urban city in the Pacific Northwest. Families were randomized into intervention and "school as usual" groups. Families in the intervention condition benefited from universal family resource center services and FCU interventions as appropriate. Across trials, evidence showed that engaging in the FCU offers considerable benefits for youth at risk for growth in problem behavior, substance use, involvement in deviant peer friendships, arrest rates, depression, and school absences during middle school and into high school (Connell & Dishion, 2008; Connell, Dishion, Yasui, & Kavanagh, 2007; Connell,