This is a pre-copyedited, author-produced PDF of an article accepted for publication in the *Journal of Emotional and Behavioral Disorders* following peer review. The version record [citation below] is available at https://doi.org/10.1177/10634266221143720

Garbacz, S. A., Stormshak, E. A., McIntyre, L. L., Bolt, D., & Huang, M. (2022). Family-centered prevention during elementary school to reduce growth in emotional and behavior problems. *Journal of Emotional and Behavioral Disorders.* Advance online publication. https://doi.org/10.1177/10634266221143720

S. Andrew Garbacz

University of Wisconsin–Madison

Elizabeth A. Stormshak

University of Oregon

Laura Lee McIntyre

University of Oregon

Daniel Bolt

University of Wisconsin–Madison

Mingya Huang

University of Wisconsin–Madison

Author Note

This research was supported by the Institute of Education Sciences, U.S. Department of Education through Grant R305A140189 to the University of Oregon. The opinions expressed are those of the authors and do not represent the views of the Institute or the U.S. Department of Education.

Abstract

The purpose of this study was to examine the efficacy of the Family Check-Up initiated during kindergarten on teacher-report of children's emotional and behavior concerns in fourth grade. Participants were 57 primary caregivers, along with their children and teachers. Participants were randomized to a Family Check-Up condition or school-as-usual control condition. Teachers reported on children's emotional and behavior concerns at kindergarten and fourth grade. Findings suggested children whose caregivers were randomized to the Family Check-Up condition outperformed children in the school-as-usual control condition on moderate and serious emotional and behavior concerns in fourth grade. Implications for aligning and integrating family-centered assessment and treatment in schools are discussed.

Keywords: emotional and behavior problems, family-centered, family check-up

Family-Centered Prevention during Elementary School to Reduce Growth in Emotional and Behavior Problems

The development of emotional and behavior problems in childhood is commonly influenced through a multidirectional process that includes the home setting, the school setting, and community settings (Sanders et al., 2020). For example, problems in the home setting, such as ineffective parenting can lead to challenges with a child's self-regulation and contribute to emotional and behavior problems which may be reinforced at school through peer or adult attention (Moilanen et al., 2014; Patterson, 2016). In addition, children with emotional concerns in elementary school may lack sufficient support at home or school for building social-emotional competencies (Weist et al., 2018). In the absence of intervention, emotional and behavior problems that develop in early childhood and elementary school can cascade over time, leading to more significant mental and behavioral health concerns in elementary school (Welchons & McIntyre, 2017), adolescence, and adulthood (Masten & Cicchetti, 2010).

Although children with emotional and behavior problems in early elementary school are at risk for significant mental health concerns in adolescence and adulthood, children with serious emotional and behavioral problems are at even greater risk for these negative life-course outcomes (Loeber, 1987). For example, children with serious emotional and behavior problems early in life are more likely to be involved in violent crime and experience problems with interpersonal relationships in adulthood (McMahon et al., 2006; Moffitt, 1993). All children with emotional and behavior concerns in early elementary school would benefit from early intervention, but children with more serious emotional and behavior concerns may benefit from these early interventions even more than children with mild concerns (Slough et al., 2008).

Despite the cross-setting emotional and behavior support needs of children in elementary school, typical school and community services are delivered in a siloed manner (Garbacz et al., 2018). This siloed approach to service delivery disconnects supports from the home setting and misses an opportunity to engage a primary context that may be contributing to children's emotional and behavior problems (Garbacz et al., 2017; Stormshak et al., 2000). A developmental-ecological model provides a useful framework for contextualizing emotional and behavior problems in childhood (Greeberg & Abenavoli, 2017). A developmental-ecological model depicts the influence of interconnected systems on child development (Bronfenbrenner, 1992). This model shows the influence of parents and teachers in homes and schools (microsystems), connections across home and school (mesosystem), as well as more distal contexts (exosystem) and ideologies (macrosystem) on the development of emotional and behavior problems over time (chronosystem). Using a developmental-ecological model, assessment and treatment can be aligned and integrated for children in a manner that promotes building knowledge and skills of key stakeholders, such as parents and teachers, who can positively influence the development of emotional and behavior competencies in children. Children who have serious emotional and behavior concerns early in life are more likely to experience family (microsystem) and community (exosystem) risk factors, such as high parent stress, low family income, high family conflict, and high neighborhood crime (McMahon et al., 2006).

Grounded in a developmental-ecological model, family-centeredness emphasizes the pivotal role of families in supporting their children's development through supporting families in identifying ways to promote their family's wellbeing and children's functioning in ways that are consistent with their values, beliefs, and culture (Dunst et al., 2007). Indeed, findings from

family-centered intervention trials suggest that engaging parents in an ecological approach to assessment and treatment can promote children's social-emotional competencies and reduce emotional and behavior concerns over time (Stormshak et al., 2011). In fact, these family-centered interventions may be most needed for children who have serious emotional and behavior concerns in early elementary school. The Family Check-Up (FCU) is a family-centered model that integrates a developmental-ecological approach to assessment and treatment with findings from intervention trials that suggest its efficacy for promoting positive family and child outcomes (Stormshak & Dishion, 2009).

The FCU is a school-based and family-centered approach to assessment and treatment. The FCU was designed to be brief, strengths-based, collaborative, and include motivational interviewing as a method of communication to promote families' goal directed change. Three stages encompass the FCU: an initial interview, an ecological assessment, and a feedback session. After the feedback session, families have the option of participating in additional treatment sessions to address their goals. Findings from randomized controlled trials in middle school showed effects of the FCU on self-regulation, school engagement, depression, and substance use (Stormshak et al., 2011; Stormshak et al., 2005; Stormshak et al., 2010). Findings from trials during early childhood similarly showed improvements in self-regulation and behavior problems (Dishion et al., 2008; Lunkenheimer et al., 2008).

Findings from a recent trial of the FCU at kindergarten school entry are suggesting similar effects relative to trials in middle school and early childhood. For example, based on random assignment to the FCU or a school-as-usual control condition, results of the FCU initiated during kindergarten suggest improvements in parenting skills and reductions in emotional and behavior problems at first and second grade (Garbacz et al., 2020; Stormshak et

al., 2021). Despite these promising findings, additional research on the FCU during elementary school is needed to understand effects of the FCU initiated during kindergarten on emotional and behavior problems in later elementary school. Of particular importance during elementary school is the extent to which interventions can reduce growth in moderate and serious emotional and behavior problems. Problems that are rated by teachers as moderate or serious in nature may be more concerning to teachers (Splett et al., 2019). In addition, children exhibiting moderate or serious concerns in elementary school are at particular risk of developing more serious concerns later in life (Valdez et al., 2011).

Study Purpose and Research Questions

Conducted in the context of a randomized controlled efficacy trial of the FCU in elementary school, we sought to examine the efficacy of the FCU initiated during kindergarten on teacher-report of children's emotional and behavior problems in fourth grade. Based on research findings that suggest children with more serious emotional and behavior concerns in early elementary school may be most in need of family-centered interventions like the FCU, we examined two research questions: (a) What is the efficacy of the FCU on teacher-report of children's emotional and behavior problems in fourth grade? (b) What is the efficacy of the FCU on teacher-report of moderate and serious emotional and behavior problems in fourth grade?

Method

Participants and Setting

This study received approval from the authors' institution review board and research compliance office. The efficacy trial included two cohorts. Cohort 2 teacher report data could not be collected due to changes to schooling during the SARS-CoV-2 pandemic. Thus, the present study includes only Cohort 1 teacher report data.

Table 1 reports demographic characteristics of participants for the total Cohort 1 sample and for the FCU and school-as-usual control condition. Figure 1 displays allocation to condition. Primary caregivers from five schools were recruited at kindergarten entry. Schools used a variety of mechanisms to recruit families, such as notifications at parent-teacher conferences and through flyers. The presence of emotional and behavior problems was not an eligibility criterion as the FCU was offered to all families who were randomly assigned to the FCU condition. The Cohort 1 sample for this study included 57 caregivers, with 26 randomized to the FCU condition and 31 randomized to a school-as-usual control condition. As Figure 1 indicates, this sample of 57 caregivers is reduced from the total Cohort 1 sample, with the present sample reflecting those caregivers who could be reached at fourth grade (wave 5). A variety of methods were used to retain families over time, such as sending birthday cards each year and including with each data collection attempt a contact information sheet, requesting updated contact information for the family and their friends or relatives. In addition, before each mailing, phone calls and text messages were sent to make contact and determine the best way to send a mailing. Also, "address service requested" stamps were used to obtain notification of new addresses. Compensation was also provided to families. Despite these procedures, some families could not be reached at wave 5. Of note, the project was originally designed to go through wave 4; thus, families were not expecting to receive outreach at wave 5. This combination of activities likely contributed to obtaining data for a portion of the Cohort 1 families.

Caregivers were on average approximately 39 years of age. Eighty-six percent of caregivers reported as female. The average age of participating children was 9.69 (SD = 0.47). Primary caregivers reported that approximately 65% of children were White and approximately 23% of children had multiple races/ethnicities. High school was reported to be the highest level

of education by approximately 25% of primary caregivers; about 5% reported having completed less than a high school degree and approximately 25% reported having completed some college education with about 23% completing a 4-year college degree. Children's fourth grade teachers completed posttest assessments. Children started the study in kindergarten in one of five schools in an urban city and surrounding suburban areas in the Pacific Northwest region of the United States. To collect assessments from teachers at fourth grade, children were tracked as they moved to new schools or districts and attempts were made to collect data from children's teachers in those new schools.

Study Variables

Teachers reported on children's emotional and behavior problems on the Strengths and Needs Survey (SANA; Moore et al., 2016) on a paper and pencil form. Kindergarten teachers completed the SANA at baseline (wave 1). Fourth grade teachers completed the wave 5 assessment. The SANA is a nine-item measure rated on a 4-point scale (0 = *no concern*, 1 = *mild concern*, 3 = *moderate concern*, 4 = *serious concern*). Items assess areas in which students may need additional support such as behaves well; pays attention; sad, worried, or irritable; and aggressive toward others. The SANA has evidence of reliability and validity, with internal consistency reliability using the present sample ($\alpha = .92$). To obtain a total score on the SANA for research question 1, items were summed. To determine moderate and serious concerns, a count of items rated as moderate and serious concerns yielded a frequency count that was used in the analysis of research question 2. Although both variables are constructed from the same data, the variables have different meaning and thus are used in relation to different research questions.

Family Check-Up Intervention Protocol

Training of Therapists

Therapists in the present study were doctoral-level psychologists. Therapist training in the FCU included training on the FCU itself, training on developmental issues in relation to education and emotional and behavior concerns, motivational interviewing, and academic supports relevant for early elementary school (Stormshak & Dishion, 2009). In addition, therapists observed three live FCUs inclusive of an initial interview, ecological assessment, and feedback session. As a final step, therapists led two FCUs, which were independently coded using the COACH rating system, which quantifies the extent to which a therapist implements the FCU with fidelity (Smith et al., 2013). Before implementing the FCU with participants in the study, therapists had to have two FCUs rated within the "satisfactory" range on the COACH (minimum score of 5 out of 9). Additional support was provided to therapists until they reached fidelity (Smith et al., 2018). During implementation with participants in the study, therapists participated in weekly group supervision to maximize fidelity. These supervision meetings emphasized case conceptualization and delivery of feedback. Fidelity of FCU implementation was monitored throughout the project using the COACH. During project implementation, all therapists were required to implement the FCU within the "satisfactory" range based on the COACH.

Intervention Delivery

The FCU includes three steps, an initial interview, an ecological assessment, and a feedback session. Families who were randomized to the FCU condition were offered the FCU. Families who engaged in the FCU received the initial interview and an ecological assessment during one session. Following this session, families were offered a feedback session. Of the 83 families in the Cohort 1 FCU condition, 52 (63%) completed a feedback session and 41 (49%) completed follow-up sessions. Of the 26 families in the analysis sample, 25 (96%) completed a

feedback session and 21 (81%) completed follow-up sessions. During the feedback session, therapists identified possible intervention targets based on the initial interview and ecological assessment. These intervention targets addressed common areas of focus for early elementary school, such as home-to-school planning, parenting skills, and early learning. Therapists engaged in collaborative and family-centered goal planning with caregivers to identify intervention areas most relevant to families (Dishion et al., 2011). Common intervention targets included positive parenting, behavioral routines in the home, and home-to-school planning.

School-as-Usual

No restrictions were placed on families in the school-as-usual condition. Families in the school-as-usual condition received typical support from school or community, such as school communication about classroom rules and social-emotional skills, and community mental health support. There were no significant differences between the FCU and school-as-usual conditions for the analysis sample on the proportion of children who received special services in school at pretest [χ^2 (1) = 1.692, $p > 0.05$] or at wave 4 [χ^2 (1) = 1.008, $p > 0.05$].

Analysis Plan

The sample included teachers who had wave 1 and wave 5 data. Our analysis compared relative change in the SANA sum score and the SANA count of moderate and serious concerns from kindergarten (wave 1) to fourth grade (wave 5) across the FCU and school-as-usual conditions. Using the GLM routine in R (R Core Team, 2020), we applied a residualized change approach in which each wave 5 outcome was regressed onto its corresponding wave 1 measure and a dummy-coded condition variable (0 = school-as-usual, 1 = FCU). The estimated coefficient on the condition variable quantifies the difference in mean residualized change between the intervention and control conditions. This residualized change approach accounts for

possible disproportionate change in the outcome from wave 1 to wave 5 related to the wave 1 measure.

Results

Table 2 shows descriptive statistics for the study variables. Table 3 depicts residualized change on the teacher-report of emotional and behavior concerns as measured on the SANA across the FCU and school-as-usual conditions. As seen from Table 3, both outcomes show a high degree of dependence over time, with the wave 1 measurement being strongly predictive of the wave 5 measurement. In both instances, the condition estimate is negative, implying lower estimated increases from wave 1 to wave 5 in the FCU condition relative to the school-as-usual condition. However, the effect is only statistically significant ($p < .05$) for the count of moderate and serious concerns, implying less of an increase in moderate and serious concerns based on teacher report for children in the FCU condition compared to children in the school-as-usual condition.

The coefficient estimates related to condition can be divided by the residual standard deviation estimate in each analysis to create an effect size estimate related to Cohen's d. The corresponding effect sizes for each analysis are thus d = -2.389/4.656 = -.51 for the total sum score and d =-1.229/1.897 = -.65 for the count of moderate and serious concerns, indicating slightly larger than medium effects in both cases.

Discussion

With a reduced sample of only Cohort 1 families, the purpose of this study was to examine the efficacy of the FCU initiated during kindergarten on teacher-report of children's emotional and behavior problems in fourth grade. In addition to examining overall emotional and behavior problems, we also investigated the efficacy of the FCU on moderate and serious

emotional and behavior problems. Findings from prior efficacy trials of the FCU during early elementary school suggested improvements for children whose families were randomly assigned to the FCU condition on teacher-report of emotional and behavior problems at first and second grade (Garbacz et al., 2020; Stormshak et al., 2021). The present study extends this body of work by extending these findings to later elementary school, into fourth grade, with specific implications for children with more serious concerns.

Main study findings suggested that children who were randomized to the FCU condition outperformed children in the school-as-usual condition on teacher-report of moderate and serious emotional and behavior concerns. The effect size for this finding was d = -.65 suggesting slightly larger than medium effect. For children in the school-as-usual condition, their teacher-reported count of moderate and serious concerns increased from .80 at Wave 1 to 2.13 at Wave 5. In contrast, for children in the FCU condition, their teacher-reported count of moderate and serious concerns decreased from 1.59 at Wave 1 to 1.54 at Wave 5. This finding underscores research that suggests family-centered intervention is an important approach to reduce escalations in emotional and behavior concerns for children across the elementary school years (Masten & Cicchetti, 2010; Moilanen et al., 2014), particularly for children with who have moderate or serious concerns (Slough et al., 2008).

In addition to the statistically significant finding on teacher-report of moderate and serious concerns, the present study also showed effects on teacher-report of overall emotional and behavior problems. Findings from that analysis did not demonstrate a statistically significant effect on teacher-report of children's emotional and behavior concerns at wave 5. Together, these findings suggest that the FCU may be most effective at reducing emotional and behavior problems that are more serious in nature at fourth grade. Of note, nearly all families (25 out of

26) completed a feedback session and most families completed follow-up sessions after feedback (21 out of 26). These levels of engagement in the FCU exceed what was observed in Stormshak et al. (2021) for the entire sample during early elementary school. The fact that nearly all families completed a feedback session in the present sample may suggest that families were experiencing elevated needs which may have placed their children at particular risk for more serious concerns.

Within the FCU, there are several features that may be of particular benefit to families who have a child with moderate or serious emotional and behavior concerns. Families who have a child with more serious emotional and behavior concerns are more likely to experience family stress and conflict, along with community-level risks (McMahon et al., 2006). The ecological assessment and tailored goal setting may help families who are experiencing these complexities organize and focus goals for their family and child. In addition, the motivationally oriented process that characterizes communication in the FCU may help empower parents to take action within a stressful set of circumstances to make positive changes that benefit their family and children. This combination of tailored goal setting and motivationally oriented communication contributes to a positive therapist client relationship, which can promote service utilization (Forgatch et al., 2005). Indeed, in an early childhood sample, Leijten et al. (2015) found that families with the highest risk engaged in the FCU more than families with lower risk.

Study Limitations and Future Research Directions

Several limitations should be considered when interpreting the present findings. This study included only Cohort 1 data because teacher-report data at Wave 5 could not be collected due to changes in schooling during the SARS-CoV-2 pandemic. Future research is needed at assessment waves that include the full efficacy trial sample. A related limitation concerns the

sample size. Data for several children in Cohort 1 within the school-as-usual and FCU conditions could not be collected. A factor that may have contributed to these missing data is children moving out of their original school or school district, such as moving out of state. Although we made many attempts to reach families who moved, several families could not be reached. Because data for all children could not be collected, study results should be interpreted with caution. Another limitation concerns capacity for the FCU. The FCU was implemented as part of a funded grant, which supported training and supervising parent consultants. Future research should explore building school capacity to implement the FCU. Finally, the present study examined direct impacts on teacher-report of children's emotional and behavior concerns. Future research with larger samples should examine nuances that may be associated with these findings, such as factors that may explain the effect on teacher-report of moderate and serious emotional and behavior programs, such as effective parenting practices and self-regulation (Fosco et al., 2013; Stormshak et al., 2021).

Implications

The present study supports a line of work that suggests family-centered approaches to assessment and treatment are important to improve outcomes for children with emotional and behavior concerns, particularly for those children with more serious emotional and behavior concerns in elementary school (Stormshak et al., 2011; Stormshak et al., 2021). Typical school practices focus on the school setting and include a lack of collaborative mechanisms to involve families in supporting their children (Garbacz et al., 2018). Findings from the present study suggest schools should re-orient these approaches toward systems and practices that center on families and provide supports in a manner that reflects a family-centered orientation, emphasizing families' values, beliefs, and culture (Dunst et al., 2007; Stormshak & Dishion,

2009). In particular, the present study offers additional support for the FCU, a family-centered approach to assessment and treatment with findings that suggest efficacy on a range of family and child outcomes (Stormshak et al., 2011; Stormshak et al., 2021; Stormshak et al., 2010). In this study, findings suggested effects of the FCU initiated during kindergarten on teacher-report of children's moderate and serious emotional and behavior problems in fourth grade. When re-orienting school systems and practices toward family-centeredness, future research can examine implementation and sustainability of the FCU in early elementary school with school professionals serving as parent consultants embedded within a school's tiered systems of support (Stormshak et al., 2016).

To realize a vision of enhanced family-centered services within a school's tiered system of support, it may be helpful to consider workforce development and approaches to braid family-centered approaches to assessment and treatment. Existing professional standards are insufficient to prepare a school mental health workforce for family-centered services (see the National Association of School Psychologists Professional Standards, 2020; Sheridan & Garbacz, 2021). Better integration of family-centered services and family-school partnership interventions into professional standards for graduate training programs is essential (Sheridan & Garbacz, 2021). A second component to realizing a vision for improved family-centered support in schools is braiding within existing school systems and practices with connections to related youth- and family-serving agencies (McClain et al., 2021; Stormshak et al., 2016). Such an approach can align and integrate family services and family-school collaboration within school-based approaches for supporting children's emotional and behavior competencies. For example, schoolwide strategies might focus on proactive outreach to families and enhanced communication about positive behavior support (Garbacz et al., 2021). Additional supports can

emphasize tailored services, such as the FCU, for families and children with intensive support needs.

References

Bronfenbrenner, U. (1992). *Ecological systems theory*. Jessica Kingsley Publishers.

Dishion, T. J., Shaw, D., Connell, A., Gardner, F., Weaver, C., & Wilson, M. (2008). The Family Check-Up with high-risk indigent families: Preventing problem behavior by increasing parents' positive behavior support in early childhood. *Child Development, 79*(5), 1395–1414. https://doi.org/10.1111/j.1467-8624.2008.01195.x

Dunst, C. J., Trivette, C. M., & Hamby, D. W. (2007). Meta-analysis of family-centered helpgiving practices research. *Mental Retardation and Developmental Disabilities, 13*(4), 370–378. https://doi.org/10.1002/mrdd.20176

Forgatch, M. S., Patterson, G. R. & DeGarmo, D. S. (2005). Predictive validity for a measure of competent adherence to the Oregon Model of Parent Management Training (PMTO). *Behavior Therapy, 36,* 3–13. https://doi.org/10.1016/S0005-7894(05)80049-8

Garbacz, S. A., Herman, K. C., Thompson, A. M., & Reinke, W. M. (2017). Family engagement in education and intervention: Implementation and evaluation to maximize family, school, and student outcomes. *Journal of School Psychology, 62,* 1–10. https://doi.org/10.1016/j.jsp.2017.04.002

Garbacz, S. A., Lee, Y., Hall, G. J., Stormshak, E. A., & McIntyre, L. L. (2021). Initiating family-school collaboration in school mental health through a proactive and positive strengths and needs assessment. *School Mental Health*. Advance online publication. https://doi.org/10.1007/s12310-021-09455-5

Garbacz, S. A., McIntosh, K., Vatland, C., Minch, D., & Eagle, J. W. (2018). Identifying and examining school approaches to family engagement within schoolwide positive

behavioral interventions and supports. *Journal of Positive Behavior Interventions, 20*(3), 127–137. https://doi.org/10.1177/1098300717752318

Garbacz, S. A., McIntyre, L. L., Stormshak, E. A., & Kosty, D. B. (2020). The efficacy of the Family Check-Up on children's emotional and behavior problems in early elementary school. *Journal of Emotional and Behavioral Disorders, 28*(2)*,* 67–79. https://doi.org/10.1177/1063426618806258

Greenberg, M. T., & Abenavoli, R. (2017). Universal interventions: Fully exploring their impacts and potential to produce population-level impacts. *Journal of Research on Educational Effectiveness, 10*(1), pp. 40–67. https://doi.org/10.1080/193457.2016.1246632

Leijten, P. Shaw, D. S., Gardner, F., Wilson, M. N., Matthys, W., & Dishion, T. J. (2015). The family check-up and service use in high-risk families of young children: A prevention strategy with a bridge to community-based treatment. *Prevention Science, 16*(3), 397–406. https://doi.org/10.1007/s1121-014-0479-x

Loeber, R. (1987). The prevalence, correlates, and continuity of serous conduct problems in elementary school children. *Criminology, 25*(3), 615–642. https://doi.org/10.111/j.1745-9125.1987.tb00813.x

Lunkenheimer, E. S., Dishion, T. J., Shaw, D. S., Connell, A. M., Gardner, F. E. M., Wilson, M. N., & Skuban, E. M. (2008). Collateral benefits of the Family Check-Up on early childhood school readiness: Indirect effects of parents' positive behavior support. *Developmental Psychology, 44*(6)*,* 1737–1752. https://doi.org/10.1037/a0013858

Masten, A. S., & Cicchetti, D. (2010). Developmental cascades. *Development and Psychopathology, 22,* 491–495. https://doi.org/10.1017/S0954579410000222

McClain, M. B., Shahidullah, J. D., Harris, B., McIntyre, L. L., & Azad, G. (2021). Reconceptualizing educational contexts: The imperative for interprofessional and interagency collaboration in school psychology. Advance online publication. https://doi.org/10.1080/2372966X.2021.1949247

McMahon, R. J., Wells, K. C., & Kotler, J. S. (2006). Conduct problems. In E. J. Mash & R. A. Barkley (Eds.), *Treatment of childhood disorders* (3rd ed., pp. 137–268). Guilford Press.

Moffitt, T. E. (1993). Adolescence-limited and life-course-persistent antisocial behavior: A developmental taxonomy. *Psychological Review, 100*(4), 674–701. https://doi.org/10.1037/0033-295x.100.4.674

Moilanen, K. L., Rasmussen, K. E., & Padilla-Walker, L. M. (2014). Bidirectional associations between self-regulation and parenting styles in early adolescence. *Journal of Research on Adolescence, 25*(2), 246–262. https://doi.org/10.1111/jora.12125

Moore, K. J., Garbacz, S. A., Gau, J. M., Dishion, T. J., Brown, K. L., Stormshak, E. A., & Seeley, J. R. (2016). Proactive parent engagement in public schools: Using a brief strengths and needs assessment in a multiple-gating risk management strategy. *Journal of Positive Behavior Interventions, 18*(4), 230–240. https://doi.org/10.1177/1098300716632590

National Association of School Psychologists (2020). *The professional standards of the National Association of School Psychologists*. https://www.nasponline.org/x55315.xml

Patterson, G. R. (2016). Coercion theory: The study of change. In J. J. Snyder & T. J. Dishion (Eds.), *The oxford handbook of coercive relationship dynamics* (pp. 7–22). Oxford University Press.

R Core Team (2020). R: A language and environment for statistical computing. *R foundation for statistical computing*. https://www.r-project.org.

Sanders, M. T., Bierman, K. L., & Heinrichs, B. S. (2020). Longitudinal associations linking elementary and middle school contexts with student aggression in early adolescence. *Journal of Abnormal Child Psychology, 48,* 1569–1580. https://doi.org/10.1007/s10802-020-00697-6

Sheridan, S. M., & Garbacz, S. A. (2021). Centering families: Advancing a new vision for school psychology. *School Psychology Review*. Advance online publication. https://doi.org/10.1080/2372966X.2021.195860

Smith, J. D., Dishion, T. J., Shaw, D. S., & Wilson, M. N. (2013). Indirect effects of fidelity to the Family Check-Up on changes in parenting and early childhood problem behaviors. *Journal of Clinical and Consulting Psychology, 81*(6)*,* 962–974. https://doi.org/10.1037/a0033950

Slough, N. M., McMahon, R. J., Bierman, K. L., Coie, J. D., Dodge, K. A., Foster, E. M., Greenberg, M. T., Lochman, J. E., & Pinderhughes, E. E. (2008). Preventing serious conduct problems in school-age youth: The fast track program. *Cognitive and Behavioral Practice, 15*(1)*,* 3–17. https://doi.org/10.1016/j.cbpra.2007.04.002

Splett, J. W., Garzona, M., Gibson, N., Wojtalewiczj, D., Raborn, A., & Reinke, W. M. (2019). Teacher recognition, concern, and referral of children's internalizing and externalizing behavior problems. *School Mental Health, 11*(2), 228–239. https://doi.org/10.1007/s12310-018-09303-z

Stormshak, E. A., Bierman, K. L., McMahon, R. J., Lengua, L. J., & Conduct Problems Prevention Research Group. (2000). Parenting practices and child disruptive behavior

problems in early elementary school. *Journal of Clinical Child Psychology, 29*(1), 17–29. https://doi.org/10.1207/S15374424jccp2901_3

Stormshak, E. A., Brown, K. L., Moore, K. J., Dishion, T. J., Seeley, J., & Smolkowski. K. (2016). Going to scale with family-centered, school-based interventions: Challenges and future directions. In S. M. Sheridan & E. Kim (Eds.), *Family–school partnerships in context* (pp. 25–44). Springer.

Stormshak, E. A., Connell, A. M., Véronneau, M. H., Myers, M. W., Dishion, T. J., Kavanagh, K., & Caruthers, A. S. (2011). An ecological approach to promoting early adolescent mental health and social adaptation: Family-centered intervention in public middle schools. *Child Development*, *82*(1), 209–225. https://doi.org/10.1111/j.1467-8624.2010.01551.x

Stormshak, E. A., DeGarmo, D., Garbacz, S. A., McIntyre, L. L., & Caruthers, A. (2021). Using motivational interviewing to improve parenting skills and prevent problem behavior during the transition to kindergarten. *Prevention Science, 22,* 747–757. https://doi.org/10.1007/s11121-020-01102-wWeist et al., 2018

Stormshak, E. A., & Dishion, T. J. (2009). A school-based, family-centered intervention to prevent substance use: The Family Check-Up. *The American Journal of Drug and Alcohol Abuse, 34*(4), 227–232. https://doi.org/10.1080/00952990903005908

Stormshak, E. A., Dishion, T. J., Light, J., & Yasui, M. (2005). Implementing family-centered interventions within the public middle school: Linking service delivery to change in student problem behavior. *Journal of Abnormal Child Psychology, 33*(6), 723–733. https://doi.org/10.1007/s10802-005-7650-6

Valdez, C. R., Lambert, S. F., & Ialongo, N. S. (2011). Identifying patterns of early risk for mental health and academic problems in adolescence: A longitudinal study of urban youth. *Child Psychiatry and Human Development, 42*(5)*,* 521–538. https://doi.org/10.1007/s10578-011-0230-9

Welchons, L. K. W., & McIntyre, L. L. (2017). The transition to kindergarten: Predicting socio-behavioral outcomes for children with and without disabilities. *Early Childhood Education Journal, 45*(1), 83–93. https://doi.org/10.1007/s10643-015-0757-7

Table 1

Demographic Characteristics of Caregivers and Children

	% Total (N = 57)	% FCU (n = 26)	% Control (n = 31)
Primary caregiver mean (*SD*) age	39.07 (6.06)	38.77 (3.64)	39.34 (7.67)
Primary caregiver gender			
Female	86.0	96.2	77.4
Male	14.0	3.8	22.6
Primary caregiver highest level of education			
Less than high school	5.3	0.0	9.7
High school	24.6	23.1	25.8
Partial college	24.6	19.2	29.0
Junior college or associate's degree	10.5	19.2	3.2
4-year college degree	22.8	30.8	16.1
Graduate professional training	12.3	7.7	16.1
Children's mean (*SD*) age	9.69 (0.47)	9.77 (0.43)	9.62 (0.94)
Children's gender			
Female	40.4	42.3	38.7
Male	59.6	57.7	61.3
Children's race/ethnicity			
White	64.9	69.2	61.3
Multiple races/ethnicities	22.8	19.2	25.8
Hispanic/Latino	5.3	3.8	6.5
Asian	3.5	3.8	3.2
Black/African American	1.8	3.8	0.0
Pacific Islander	1.8	0.0	3.2

Note. FCU = Family Check-Up.

Table 2

Descriptive Statistics for Study Variables

	School-as-Usual		Family Check-Up	
	Wave 1	Wave 5	Wave 1	Wave 5
SANA total sum score	3.75	6.40	5.52	5.84
SANA count of moderate and serious concerns	.800	2.13	1.59	1.54

Note. SANA = Strengths and Needs Assessment.

Table 3

Residualized Change in Teacher Report of the SANA Sum Score and the Count of Moderate and Serious Concerns from Wave 1 to Wave 5

SANA Total Sum Score					SANA Count of Moderate and Serious Concerns				
Coeff	Est.	Std Error	t-statistic	p-value	Coeff	Est.	Std Error	t-statistic	p-value
Intercept	3.577	1.051	3.40	.002	Intercept	1.504	.394	3.82	<.001
Wave 1	.743	.117	6.34	<.001	Wave 1	.770	.132	5.82	<.001
Condition	-2.389	1.450	-1.65	.107	Condition	-1.229	.564	-2.18	.035

Note. SANA = Strengths and Needs Assessment.

Figure 1

Participant Enrollment