

**Efficacy of Enhanced First Step to Success Intervention for Tertiary-Level
Students with Disruptive Behavior (R324A150179)
Research Performance Progress Report: NCE**

In May 2015, the University of Louisville, in collaboration with several Kentucky school districts and the Oregon Research Institute, was awarded a four-year, collaborative federal grant to evaluate the efficacy of the revised First Step Next (FSN) early intervention program (Walker, et al., 2015). The purpose of this on-going project is to conduct a comparative efficacy study examining the impact of 1) a school-based intervention (First Step Next; FSN) to support teachers and their students and 2) a home-based intervention (homeBase) to support parents. The study focuses on students with disruptive behavior who require tertiary-level (intensive) support to achieve school success. The specific aims for this study are to (1) examine the magnitude of immediate, pre-post effects for First Step Next-only, homeBase-only, and First Step Next -plus- homeBase interventions; (2) examine the maintenance of gains for the First Step Next-only, homeBase-only, and First Step Next -plus- homeBase interventions; (3) examine mediators and moderators of student-level intervention effects and the relationship among implementation measures and positive change on parent and teacher outcomes; and (4) identify facilitators and barriers to adoption, implementation, and sustainability of First Step Next and homeBase within and across participating schools.

Figure 1 summarizes our final screening results. In total, we have randomized 381 triads across the four conditions.

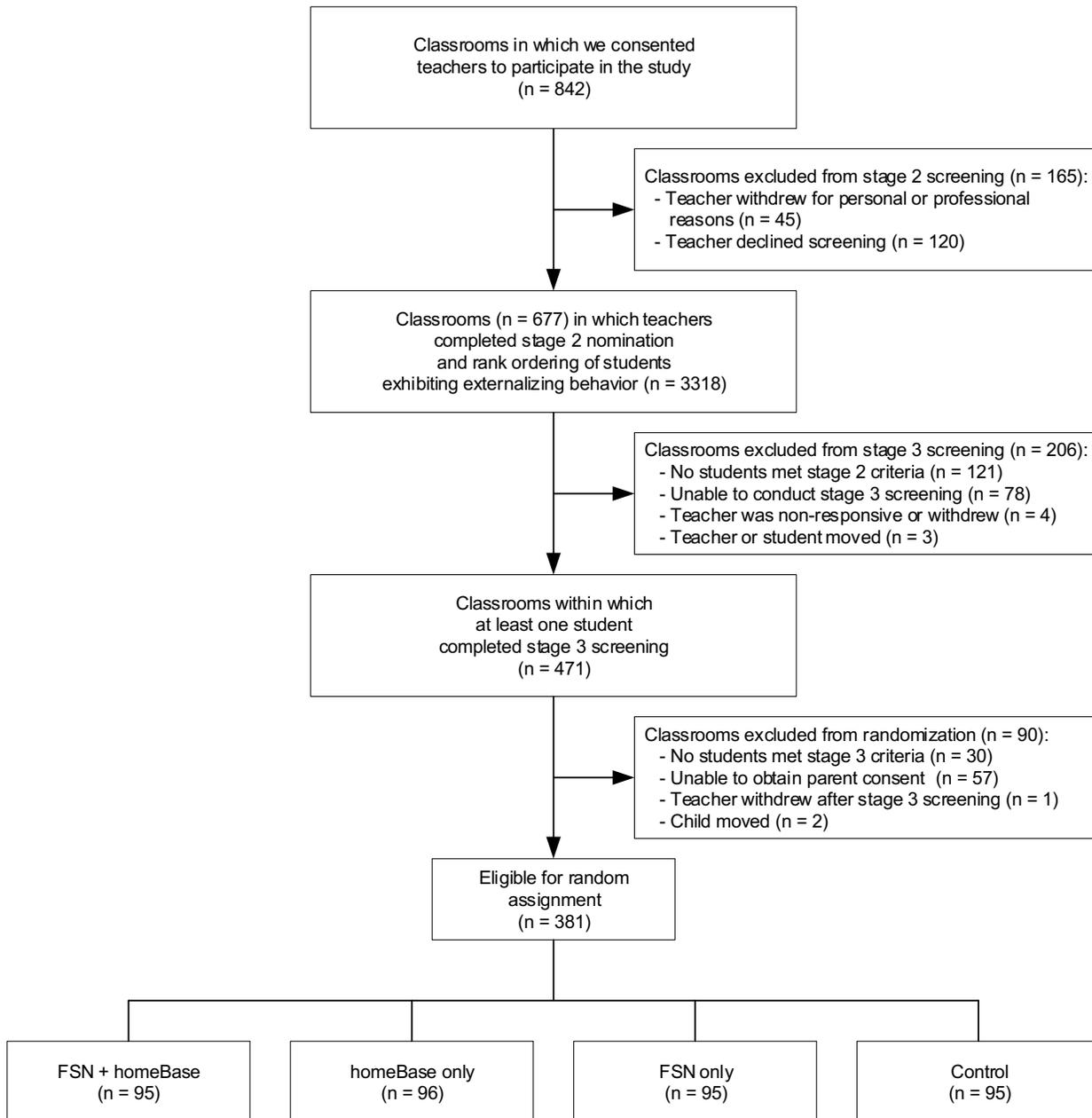


Figure 1. Final Consort Diagram

Demographic characteristics

Our sample of parents is predominantly female (89.1%). Over half of the sample is African American (52.5%) and an additional 42% reported their race as Caucasian. More than two-thirds of parents report being currently employed (69.5%) and just over one-third report incomes below poverty level (35.6%). After randomization, we found no differences on parent demographics across conditions. Students in the current sample have an average age of 6.8 years and are predominantly male (72.3%). Just over half of the participating students are African American (52.3%) and an additional 35.8% are Caucasian.

Outcome measures

Effect sizes for the FSN main effects range from .08 on Teacher-reported Academic Competence to .60 for Teacher-reported social skills. We are seeing consistent effects in the small to medium range across prosocial behavior, problem behavior, and academic indicators, including academic engagement. Consistent with our hypotheses, the effect sizes for teacher-reported outcomes are higher than those for parent-reported outcomes. Main effects from the homeBase intervention range from .01 to .33. Table 15 examines the additive effect of delivering the homeBase intervention with the FSN intervention. The effects range from .05 to .57.

Conduct a cost analysis

We made substantial progress preparing for our cost analysis and anticipate submitting a manuscript detailing a cost-benefit analysis of the FSN intervention, hB intervention, and the combined condition in summer 2020. For each of the cost analyses components, we used the Ingredients Method. Specifically, we calculated the quantity and unit prices of key ingredients or resources used to carry out the intervention during cohorts 2 and 4, and multiplied together to determine cost. Resources financed directly (e.g., coach labor, supplies) and indirectly (e.g., teacher time, overhead) were included for cost estimates to be comprehensive and reflect the opportunity cost of delivering the interventions. The per child costs to implement the FSN intervention with 87 triads was \$2,522. The per child costs to implement the homeBase intervention with 85 triads was \$755. The per child cost to implement both interventions simultaneously was \$3,277. To calculate benefits, we used both effect sizes and diagnostic changes for each condition. For example, the intervention effect sizes for teacher reported problem were .52, .24, and .47 for FSN versus the control condition, hB versus the control condition, and FSN + hB versus the control condition, respectively. As an example of diagnostic changes, 23.1%, 10.8%, and 38.2% of the student participants moved from a borderline or clinical classification on the Conduct Disorder subscale of the Child Behavior Checklist in the FSN versus the control condition, hB versus the control condition, and FSN + hB versus the control conditions, respectively. We are in the process of combining the cost and benefit results into our manuscript.

Dissemination

We were part of two research symposiums at the School Mental Health conference (Austin, TX) with colleagues Drs. Catherine Bradshaw, Julie Owens, Elise Pas, and Aaron Thompson. We also presented at Council for Exceptional Children (Portland, OR) with co-investigators Small, Feil, and Lee. This year, several research managers from Louisville presented with our colleagues from other institutions. For several of these professionals, they were able to meet colleagues they have been working with for over a decade. Specifically, Blake Skidmore presented at the School Mental Health Conference and Tara Korfhage, Ally Miller, Kiersten Bills, and Laura Johnson presented at CEC.

We have continued to edit a formal dissemination plan to guide conference and manuscript development. It has been uploaded as an attachment in this report. The following manuscripts have been accepted for publication or have been revised and resubmitted since the last report.

Frey, A.J, Small, J.W., Lee, J., Crosby, S., Seeley, J.R, Forness, S., & Walker, H.M. (2019). homeBase: Participation, engagement, alliance, and social validity of a motivational parenting intervention. *Children & Schools*, p. doi: 10.1093/cs/cdz016.

Lee, J., Frey, A.J., Warner, Z, Kelley, A. (2019). *Coaching to Improve Motivation in Early Childhood Practitioners and Parents*. In O. N. Saracho (Ed.) *Contemporary perspectives on*

research on motivation in early childhood education. Charlotte, North Carolina: Information Age Publishing.

Small, J., Frey, A., Lee, J. Seeley, J.R., Scott, T.M., & Sibley, M.H. (2020). Fidelity of motivational interviewing in school-based intervention and research. Submitted to *Prevention Science*.

Lee, L., Frey, A., Small, J., & Crosby, S. (2020). Promoting initial skill development. School-based personnel can learn to use motivational interviewing skills. Submitted to *Prevention Science*.

Next period

During the last 9 months of our project, we will: (1) finish data collection for Cohort 5 (post assessment and 6-month follow-up); (2) develop and submit manuscripts represented on our dissemination plan; (3) prepare our final report; and (4) thank and share our final results with key stakeholders.