

# A Pilot Study Examining a School-Based Parent Engagement Intervention Following School Mental Health Screening

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**Abstract** In this pilot study, we conducted a randomized controlled trial to examine the effects of a school-based engagement intervention on parent adherence to recommendations for children screened for social, emotional, behavioral, and adaptive problems at kindergarten entry. The aims were to evaluate the impact of an enhanced feedback session on parents' adherence to service-engagement recommendations, compared to a standard feedback session, and to examine predictors of adherence to recommendations. Parent and teacher reports of the behavior assessment system for children, second edition, were used to screen children ( $N = 597$ ). Parents of children identified as at risk for social, emotional, behavioral, and adaptive problems were randomized to the standard or enhanced feedback condition. Results offer preliminary evidence that the school-based engagement strategy following the screening resulted in increased parent adherence to sharing screening results with medical doctors. Analyses also revealed that after controlling for feedback condition, parents' previous service use predicted adherence to the recommendation of sharing screening results with the teachers. These findings highlight the importance of continued examination of school-based engagement interventions for families in the early stages of seeking mental health services.

**Keywords** Parent · Help-seeking · Mental health · Screening · Engagement · Intervention · School

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## Introduction

In 25–30% of the population, mental health disorders first emerge in early childhood (Merikangas et al., 2010). Despite substantial evidence that mental health problems can be reliably and validly detected at an early age (e.g., Mathiesen & Sanson, 2000), only 30% of children with developmental delays and mental health problems are identified prior to school entrance (e.g., Halfon et al., 2004; King & Glascoe, 2003) and only 20–30% with any mental health problem receive needed care (e.g., Merikangas et al., 2011).

Children must rely on parents or guardians to receive needed services. As indicated across several help-seeking models, parents must recognize that a problem exists, decide to seek help, and select and use a service (e.g., Andersen, 1995; Goldsmith, Jackson, & Hough, 1988). One model of mental health help-seeking specific to children posits that parent help-seeking involves a series of steps and decisions made by parents rather than a single, isolated choice (Srebnik, Cauce, & Baydar, 1996). This process has been described as a “help-seeking episode” involving a pattern of interactions with several individuals (e.g., friends, family, teachers, primary care doctors) over time (Rogler & Cortes, 1993).

There is substantial evidence that parents struggle at various points in the help-seeking process. For example, 33–45% of parents are unaware their child is at risk for, or is experiencing, mental health challenges, and therefore never pursue services (Bussing et al., 2003; Girio-Herrera, Owens, & Langberg, 2013; Teagle, 2002). In addition, some parents believe problems are not severe enough to warrant treatment or that a problem will improve with time (Pavuluri, Luk, & McGee, 1996). Thus, strategies are needed to increase parent awareness of at-risk symptoms,

overcome misperceptions (e.g., children will “outgrow” problem), communicate risk status, monitor behavior, and obtain evaluations or services. Lastly, some parents recognize a problem, but experience barriers that prevent obtaining or sustaining help (Kataoka, Stein, Nadeem, & Wong, 2007; Nemeroff et al., 2008).

Barriers to help-seeking have been categorized as structural (e.g., limitations of transportation, time, finances), perceptions about mental health problems (e.g., treatment unnecessary, lack of knowledge, stigma), and perceptions about mental health service professionals (e.g., lack of trust) (Owens et al., 2002). Although barriers may exist in any community, individuals in rural regions experience unique barriers such as the shortage of mental health care providers, barriers to access such as lack of public transportation, distance to nearest agency, lack of privacy, and inadequate family support due to stigma (Girio-Herrera et al., 2013; Robinson et al., 2012). This is compounded by the fact that some risk factors for mental health outcomes (e.g., substance use, child abuse) may be more prevalent in rural communities than in other communities (e.g., Havens, Young, & Havens, 2010; Robinson et al., 2012).

Consideration should also be given to family barriers, as Kazdin and colleagues found that they interfere with help-seeking and treatment engagement with clinic-based services. Families with higher reported barriers were less likely to show for appointments and more likely to drop from treatment (Kazdin, Holland, & Crowley, 1997a; Kazdin, Holland, Crowley, & Breton, 1997b), even after accounting for other family, parent, or child factors that also contributed to drop out (Kazdin et al., 1997a). Similarly, MacNaughton and Rodrigue (2001) found the only predictor of adherence to recommendations following a clinic-based assessment was parent-perceived number of barriers, whereas child severity, parent satisfaction, recommendation recall, and locus of control were not significant predictors. These results indicate that parent barriers can hinder help-seeking. Thus, interventions that increase parent problem recognition and reduce barriers to help-seeking may be critical to reducing unmet mental health needs among youth.

### School-Based Mental Health Services and Universal Screening

Relative to clinic-based delivery models, school-based models enhance access to services (Merikangas et al., 2011) and reduce barriers to such services. One study conducted in a rural community found that parents reported experiencing less stigma, greater frequency and flexibility of appointments, and fewer transportation difficulties

(Owens et al., 2008) with school services relative to clinic services. Although some services are beyond the scope of the school domain (e.g., behavior management in the home setting, medication), schools are particularly well positioned to conduct screenings and facilitate a pathway toward service engagement. In particular, they can improve problem detection and parental understanding of the problem and facilitate referrals to services offered in the school or local mental health or medical clinics.

Universal school mental health screening is an effective method of early detection (Levitt, Saka, Romanelli, & Hoagwood, 2007) that systematically screens *all* children, identifies children not typically detected through traditional teacher referral methods (Eklund et al., 2009), and provides data used in decision making for further assessment and/or treatment (Dowdy, Ritchey, & Kamphaus, 2010). Yet, screening without supportive follow-up with parents is insufficient for closing the gap between child need and services received. Namely, results from screening studies indicate that even when parents are informed of their child’s mental health risk status, a sizeable portion fail to seek adequate help. For example, 30–68% of families whose children are identified through school screening decline to attend available parenting programs (Barkley et al., 2000; Cunningham et al., 2000). Kataoka et al. (2007) found that 30% did not seek help for their child even when informed of identification of suicide risk factors. Further, a recent study in a rural setting found 61% of parents of kindergarteners identified through screening for mental health problems reported at least one or more barriers to seeking help (Girio-Herrera et al., 2013). Thus, problem detection and communication of results to parents is necessary, but insufficient for connecting youth to services. Rather, parents also need help in identifying and overcoming barriers to service use during help-seeking episodes, so they may increase the number of help-seeking episodes with professionals and move through the stages of help-seeking for services both in and out of school.

### Parent Engagement Interventions

Engagement is “the process by which families and providers develop and maintain a connection, while simultaneously demonstrating and communicating information, needs, attitudes, and values” (McGinty, Diamond, Brown, & McCammon, 2003, p. 489). Common elements of treatment engagement interventions for youth that outperform alternative interventions or control groups (across 40 randomized control trials) include: assessing strengths/needs while building rapport/alliance, promoting accessibility, providing psycho-education about services (session content, therapist role), and assigning homework (Lindsey et al., 2014). Another review (with 17 randomized control

trials) showed brief early engagement discussions, family systems approaches, family support and coping, and motivational interviewing were effective in improving engagement and retention (Ingoldsby, 2010). Thus, successful approaches involved providers who discussed benefits and expectations for treatment process and outcomes, and worked with the family to develop a plan to address barriers.

There is evidence that interventions specifically involving engaging parents of preschool and elementary school children (at-risk for social, emotional, and behavioral difficulties) can improve the developmental trajectory for these children (Baydar, Reid, & Webster-Stratton, 2003; Conduct Problems Prevention Group & Dodge, 2007). Similarly, Dishion and colleagues (e.g., Dishion et al., 2014) have shown that the use of an annual Family Check-Up (FCU) process that incorporates motivational interviewing, family assessment, feedback sessions, and 12 modules on caregiving significantly reduced growth in behavior problems in preschool and elementary school children. However, these interventions may only be helpful to the extent that parents engage in the process and adhere to the recommendations embedded within them. Indeed, one study found that greater parent engagement was associated with greater “homework” (i.e., skills practice) completion, and greater homework completion predicted greater positive treatment outcomes (Danko, Brown, Van Schoick, & Budd, 2016).

Spoth and colleagues (2002) noted these family engagement interventions should be embedded into settings that have a large proportion of children at risk for maladaptive adjustment and occur during key developmental transitions. Thus, schools may serve as an important setting whereby similar interventions could be implemented. In fact, some evidence suggests utilizing engagement components with parents in schools may increase mental health service access and use. The Positive Attitudes Toward Learning in Schools (PALS; Atkins, Graczyk, Frazier, & Abdul-Adil, 2003) used school-based “community consultants” (parents indigenous to the neighborhood) to engage parents of children referred by teachers as having disruptive behavior. Across two studies, 80 and 94% of families who were offered the school-based PALS agreed to enroll in services for their child compared to 55 and 69% of families who were offered a clinic-based service for their child (Atkins et al., 2003, 2006). Although these studies did not utilize universal screening and were limited to youth with externalizing problems, they provide evidence for the promise of engagement interventions with parents in the school setting.

Currently, the majority of existing engagement interventions target families who have *already engaged* with the mental health system, often *after* an assessment has

been completed, *after* a diagnosis has been made, and *after* treatment recommendations have been made. Not surprisingly then, many have focused on interventions to improve initial appointments, treatment attendance or retention, and treatment adherence (e.g., Staudt, 2003, 2007). Although some focused on engaging parents prior to treatment services (e.g., McKay et al., 1996), parent engagement in the early stages of help-seeking (i.e., following screening and initial identification) represents a significant gap in the literature that warrants attention. We argue that an opportune time to target parents’ early help-seeking behaviors is following a school mental health screening, when parents first learn their child may be at risk or experiencing difficulties. To our knowledge, there has been no randomized control trial of engagement interventions with parents within the school context following a universal mental health screening for a variety of childhood problems. Such research is warranted to enhance our understanding of how to improve parent recognition, reduce parental barriers, and engage parents early to improve help-seeking for children at risk for a range of social, emotional, behavioral, and adaptive difficulties.

## Current Study

We developed an engagement intervention (enhanced feedback condition) for implementation in schools that aligns with models of parent help-seeking and the literature on barriers and compared it to a standard feedback condition that did not include such enhancements. The intervention was based on the literature on assisting families within the context of early intervention programs. Namely, information should be provided in a way that respects the families individual values, provides information so that families can make their own informed decisions, offers choice regarding their involvement in and provision of services, and that incorporates strong parent and professional collaboration and partnerships (Dunst, Trivette, & Hamby, 2007). As a result, the engagement intervention was an individualized feedback session designed to increase parent help-seeking and reduce barriers to service initiation following a positive mental health screen. It was conducted *early in the help-seeking process*, specifically at the *problem recognition stage*, when most parents were learning for the first time their child was at risk for social, emotional, behavioral, or adaptive difficulties. Consistent with Spoth and colleagues recommendation (2002), this engagement intervention occurred at a key developmental time, specifically the transition to kindergarten.

Feedback for parents in both conditions included (a) providing screening results to help parents identify and recognize a problem and (b) offering recommendations to help parents to decide whether to seek help and select and

use services. However, research indicates this information alone is insufficient and requires an additional component to reduce barriers. Therefore, the enhanced condition included processes for (a) highlighting parent-reported barriers and (b) problem solving to help parents advance through the steps of the help-seeking model (Anderson, 1995) and increase the number of help-seeking episodes (i.e., increased communication with important adults in the child's life) (Srebnik et al., 1996). In theory, such help-seeking episodes can create momentum that ultimately leads to the decision to pursue services (e.g., evaluation or intervention).

All parents (regardless of condition) were given the same three recommendations: (a) communicate results to child's teacher; (b) communicate results to child's primary medical provider; and (c) obtain a comprehensive, mental health assessment outside of school to further understand the child's risk status. These recommendations are consistent with the parent help-seeking model in that they encourage communication (i.e., help-seeking episodes) with a variety of professionals to increase the likelihood of obtaining at least one source of professional support. Further, research shows parents are most likely to speak to teachers and medical doctors (rather than mental health professionals) about initial concerns (Girio-Herrera et al., 2013) and initially pursue medical evaluation/intervention for their children as compared to psychological intervention for mental health challenges (e.g., MacNaughton & Rodrigue, 2001). Because teachers and medical providers often have ongoing relationships with families, they are well positioned to help navigate the next service-related step within their given system if appropriate (e.g., teacher: refers the child to a response-to-intervention team to consider early intervention or further evaluation; physician: evaluates, monitors, refers to a mental health practitioner, and encourages supports across other systems as well). Finally, this is also consistent with providing parents with all school- and community-based resources and choices and encouraging strong collaborations with community partners (Dunst et al., 2007) so that parents can make small, yet meaningful, help-seeking steps that can be taken toward engaging within each system (schools, medical clinics, mental health agencies), such as meeting with school staff to discuss risk status or calling to schedule an appointment with a medical doctor or psychologist for evaluation. The first aim was to evaluate the impact of the enhanced feedback session on parents' adherence to recommendations relative to a standard feedback session. It was hypothesized that parents in the enhanced condition would show higher rates of adherence to recommendations 3 months after feedback, compared to parents in the standard feedback condition. The second aim was to uniquely examine the feedback condition, factors consistent with the

help-seeking model (i.e., parent recognition, previous help-seeking), and parental barriers in the prediction of parental adherence to recommendations following feedback held at school, while controlling for factors (i.e., socioeconomic status and child problem severity) that have been controlled in prior studies (Kazdin et al., 1997a; MacNaughton & Rodrigue, 2001).

## Method

### Participants

Parents of kindergarteners from 18 elementary schools in Southeastern Ohio were invited to participate. Children ( $N = 597$ ; 47% male; 95% Caucasian) were screened using parent and teacher versions of the behavior assessment system for children (BASC-2; Reynolds & Kamphaus, 2004), representing a 63% response rate, with 10 schools having 70% or higher. Analyses were conducted on children ( $n = 306$ ) identified as "at risk" for social, emotional, behavioral, and adaptive problems on the BASC-2. See Table 1 for participant demographic characteristics. A detailed profile of child and parent participants is available in the initial manuscript from this study (Girio-Herrera et al., 2013).

### Procedure

Table 2 provides a timeline of study activities, as well as how activities link to theory. Parents of kindergarteners were invited to participate during kindergarten registration and open houses at schools. Following consent, parents completed the demographics questionnaire, BASC-2, Barriers to Participation Scale (BTPS), and Expectations to Mental Health Care (EMHC). Parents took approximately 20 min to complete measures and received \$10 for participation. Eight to twelve weeks after the start of school, teachers ( $N = 57$ ) consented (100% response rate) during grade-level meetings. Each teacher completed one BASC-2 per consented child for an average of 13.4 students in their classroom (range 1–24) and received \$25 for participation.

All parents were mailed one of two letters: an "on-track" letter (results within normal limits) or an "at-risk" letter (results showed child's behaviors place him/her at risk for having difficulty at home and/or school). The letter to parents of an at-risk child indicated risk status, but did not provide scores or results. The letter also offered an individualized feedback session with a master's level clinician (graduate student in clinical psychology doctoral program) at the school (see content of session in Table 2). If parents did not call to schedule within a few weeks of receiving the letter, a project staff member contacted the

**Table 1** Characteristics of at-risk children of parents by feedback session attendance status

Variable	Attended feedback Standard ( <i>n</i> = 55) <i>N</i> (%)	Attended feedback Enhanced ( <i>n</i> = 40) <i>N</i> (%)	Attended feedback Total ( <i>n</i> = 95) <i>N</i> (%)	Did not attend feedback Total ( <i>n</i> = 211) <i>N</i> (%)
Child age ( <i>M</i> , <i>SD</i> )	5.44 (.28)	5.43 (.31)	5.44 (.29)	5.49 (.32)
Caregiver age ( <i>M</i> , <i>SD</i> )	31.93 (6.33)	32.97 (9.79)	32.41 (8.08)	31.04 (7.03)
Gender (% male)	23 (41.8)	21 (52.5)	44 (46.3)	107 (50.7)
Race				
White	52 (94.5)	39 (97.5)	91 (95.8)	198 (93.8)
Other	3 (5.5)	1 (2.5)	4 (4.2)	13 (6.0)
Child insured	52 (94.5)	40 (100.0)	92 (96.8)	201 (95.3)
Medicaid	11 (24.4)	10 (29.4)	21 (26.6)	58 (32.8)
Appalachian heritage	46 (85.2)	31 (86.1)	77 (85.6)	169 (85.8)
Hollingshead SES ( <i>M</i> , <i>SD</i> )	30.34 (11.56)	27.80 (10.85)	29.27 (11.28)	27.19 (10.25)
TFI less than \$20,000	16 (30.2)	16 (42.2)	32 (35.2)	77 (38.3)
Believes child has a problem	12 (23.1)	16 (40.0)	28 (30.4)	72 (34.1)
Spoke to someone about concerns	18 (33.3)	17 (45.9)	35 (38.5)	72 (34.1)
Receiving help	8 (16.3)	13 (33.3)	21 (23.9)	55 (26.1)
Evaluated for problems	9 (16.4)	14 (35.0)	23 (24.2)	35 (16.6)
Identified for special education	2 (3.6)	1 (2.6)	3 (3.2)	11 (5.2)
BTPS ( <i>M</i> , <i>SD</i> )	63.76 (19.14)	66.95 (22.59)	65.11 (20.60)	69.77 (21.67)
BSI ( <i>M</i> , <i>SD</i> )	53.56 (7.46)	53.53 (7.68)	53.55 (7.51)	53.98 (7.08)

There were no significant differences between standard and enhanced groups who attended feedback or between those who did and did not attend a session. *TFI* total family income, *BTPS* barriers to participation scale; appalachian heritage is caregiver's report that they, their parents, and their grandparents grew up in Appalachia (Southeast Ohio, West Virginia, Eastern Kentucky). Hollingshead scores ranged from 6 to 62; BTPS scores ranged from 44 to 157 with higher scores indicating greater barriers. Average Hollingshead scores indicate that the sample is largely within Strata I (unskilled laborers, menial service workers) and Strata II (machine operators, semiskilled workers); *BSI* behavioral severity index on the behavioral assessment system for children (BASC-2) (average of parent and teacher BSI); higher scores indicate greater severity

parents. If parents did not return the call, at least two messages were left and an email sent.

Prior to scheduling sessions, parents of at-risk children were randomly assigned to one of two feedback conditions (descriptions below). Namely, children were rank ordered based on severity using the BASC-2 and consecutive pairs of children were randomly assigned using a coin flip. The flip determined the condition of the first child, and the second child was assigned to the alternate condition. This procedure was used to equate child severity across conditions. Of note, results of independent-samples *t* tests and Chi-square analyses showed no significant differences on any characteristic in Table 1 between those assigned to the enhanced group and standard group, as well as between those who did and did not attend feedback. Feedback sessions occurred at the schools and child care was provided by research assistants. The clinician used a standard format for all enhanced sessions; however, part of the session was individualized based on parent barriers reported on the BTPS and EMHC; thus, session length ranged from 30 to 50 min. Parents received \$15 for attending the feedback session. Research assistants conducted follow-up phone

calls to administer the Parent Follow-Up Interview for each parent who attended feedback. Phone calls occurred 3 months following the individual feedback session. After phone interviews were completed, parents were mailed a \$5 gift card to a local store and a letter disclosing the study's purpose.

#### *Standard Feedback Intervention Session*

The parent was provided with a 5-page feedback report. Page 1 indicated that results should not be used for diagnostic purposes, and provided a guide for interpreting the BASC-2, including definitions of within normal limits, at risk, and clinically significant according the BASC-2 *t*-scores. Page 2 provided a table summarizing parent and teacher results (either within normal limits, at risk, or clinically significant) for every clinical and adaptive scale and a description of every scale. Page 3 addressed "commonly asked questions:" "What is the benefit of identifying emotional and behavior problems early in a child's life?" and "Why might parent results differ from teacher ratings results?" Page 3 and 4 provided three

**Table 2** Study timeline, activities, and link to theory

Time	Study activity	Link to theory
August to September	Kindergarten registration or open house; parents completed screening (BASC-2) and barriers measures (BTPS and EHMC)	
October and November	Teachers completed screening (BASC-2)	
November and December	Screening scored (BASC-2)	
January	Normal and at-risk letters mailed to parents	
February to May	Parents randomized to standard or enhanced feedback session	
	<i>Standard feedback</i>	<i>Enhanced feedback</i>
	Provided 5-page report	Provided 5-page report
	Explained BASC-2 and definitions of normal limits, at-risk, and clinically significant	Explained BASC-2 and definitions of normal limits, at-risk, and clinically significant
	Summarized parent and teacher results for every clinical and adaptive scale and description of each scale	Summarized parent and teacher results for every clinical and adaptive scale and description of each scale
	Answered commonly asked questions regarding benefits of early identification and differences in results across raters	Answered commonly asked questions regarding benefits of early identification and differences in results across raters
	Provided 3 recommendations (share results with teacher, share results with medical doctor, have child further assessed)	Provided 3 recommendations (share results with teacher, share results with medical doctor, have child further assessed)
	Provided a community resource list and phone numbers for further evaluation within 2 hour radius	Provided a community resource list and phone numbers for further evaluation within 2 hour radius
		Exploring reactions to results
		Asked if concerned about child and resulting family functioning
		Inquired about previous service use experience (if relevant)
		Asked whether there is support in making decisions for child
		Processing barriers reported at time of feedback or/ and those reported on BTPS and EMHC at screening
	Provided with 2 copies of 2-page “mini-report” of results to give teacher and pediatrician	Provided with 2 copies of 2-page “mini-report” of results to give teacher and pediatrician
May to August	Parents contacted to obtain follow-up information regarding adherence of recommendations using the follow-up interview	Decision to seek help  Decision to select service Overcoming barriers (enhanced only)  Decision to use service

BASC-2 behavior assessment system for children (BASC-2), BTPS barriers to participation scale, EMHC expectations of mental health care

recommendations (share results with teacher, share results with medical doctor, obtain a comprehensive assessment). Page 5 provided a community resource list of referrals and phone numbers for further evaluation within a 2 hour radius. Parents also received two “mini-reports” that included only pages 1 and 2 and were informed they should provide their child’s teacher and medical doctor with a

mini-report as a way of sharing the screening results. (Results were not provided to schools so that parent initiation of communication could be fully assessed; thus, teachers were not provided with results unless shared by parent). Parents were informed they could share results in a number of ways such as giving the mini-report in person, via mail, the child’s backpack, or verbally via phone. The

clinician used the report layout as a guide for the session and verbally discussed each part with the parent. The clinician did not discuss barriers to service use or attempt to problem solve with parents. If the parents initiated such a discussion, the clinician simply reflected and validated the parents' concerns but did not engage in the five activities unique to the enhanced condition (see Table 2).

#### *Enhanced Feedback Intervention Session*

Parents received the same intervention described above. However, after information was presented, parents in this condition received an enhancement that included: (1) exploring parent reactions to the results; (2) asking whether the parent is concerned about the child and resulting family functioning; (3) inquiring about previous service use (if relevant); (4) assessing who can support the parent in making decisions for their child; and (5) processing barriers (both structural and perceptual). Barriers were processed by first asking whether they believed anything would keep them from following the three recommendations (i.e., sharing screening results with teacher; sharing results with medical doctor; seeking further evaluation). Verbal report of any anticipated barriers mentioned by the parent was processed. Following this discussion (if relevant), the clinician had a list of barriers items the parent rated as a 4 (A fair amount) or 5 (A lot) on the BTPS and a 3 (A fair amount) or 4 (A lot) on the EMHC measure completed at the time of consent. Two measures were used for this purpose as each offered unique barriers that one alone did not offer. The parent was informed of the barriers that they previously endorsed at time of screening and were directed to choose which barriers they believed would still currently interfere with the recommendations. These barriers were discussed. Specific barriers reported can be found in the initial paper (Girio-Herrera et al., 2013); however, the primary barriers included whether the parent believed treatment is necessary or warranted, competing demands, structural barriers (e.g., cost, transportation), and perceptual barriers (e.g., stigma, trust in the provider, privacy issues). The enhanced session included components shown to be effective for engaging parents and increasing service use (Ingoldsby, 2010; Lindsey et al., 2014), but that are not typically discussed in school-based meetings with parents.

## Measures

#### *Parent Demographic Questionnaire*

Parents provided information about child and family characteristics. Socioeconomic status was quantified using Hollingshead (1975). Parent problem recognition was obtained by asking “Does your child have any problems you think he/she needs help with?” Informal and formal

support were assessed by asking if (a) they had spoken to anyone regarding a concern for their child, (b) anyone was currently helping with the problem, and (c) their child had ever been evaluated for problems. Following a “yes” response to any of these questions, parents were circled from a list of individuals from whom they received support.

#### *Behavior Assessment System for Children, Second Edition (BASC-2)*

The parent and teacher preschool versions (ages 2–5) of the BASC-2 (Reynolds & Kamphaus, 2004) were used to screen children's emotional and behavioral functioning.<sup>1</sup> Both are normed using a large, nationally representative sample; reliability and validity statistics are acceptable (Reynolds & Kamphaus, 2004). Research on construct validity has yielded moderate and high factor loadings for component scales. Criterion validity has also been established with the Achenbach System of Empirically Based Assessment (Achenbach & Rescola, 2000). BASC-2 scores can differentiate children with problems or diagnoses and those without (e.g., Pineda, Aguirre, Garcia, Lopera, Palacio & Kamphaus, 2005; Reynolds & Kamphaus, 2004). Age-based *t*-scores from the parent and teacher BASC-2 were used to determine risk status. A child was at risk if he or she received a *t*-score of 65 or greater on any clinical scale or 35 or lower on any adaptive scale on parent *or* teacher BASC-2 ratings. This score criterion was chosen because (a) the BASC-2 manual indicates *t*-scores between 60 and 69 on clinical scales and 31–40 on adaptive scales be interpreted as “at risk of developing clinically significant problems” and (b) a slightly more conservative cutoff representing a 1.5 standard deviation (i.e., *t*-scores of 65 and 35) would reduce likelihood of false positives associated with the screening. Scale-level information was utilized to ensure that all problem areas were assessed and to provide parents with specificity of a possible problem, especially as the focus of this paper is parent feedback and engagement. Lastly the “Or” rule (parent or teacher) was applied to ensure all perspectives and contexts were considered. The Behavioral Severity Index (BSI) provides a composite scale of four of the BASC-2 scales (i.e., hyperactivity, aggression, depression, attention problems). In the prediction analyses, the severity score is the average of Parent BSI and Teacher BSI.

#### *Barriers to Participation Scale (BTPS)*

Using a 5-point scale, ranging from “Not at all” (1) to “A lot” (5), parents indicated how much they agreed with 44 statements related to participation in treatment on the

<sup>1</sup> At the time this study was conducted, the BASC-2 Behavioral and Emotional Screening System (BESS) had not yet been published.

BTPS (Kazdin et al., 1997b). The BTPS has distinguished between families less likely to show for appointments and more likely to drop from treatment (Kazdin et al., 1997a, 1997b). The BTPS was modified so that rather than assuming current treatment use, parents were asked to “imagine that you want to get mental health or counseling services for your child.” A total sum score was calculated with higher scores indicating greater perceived barriers to mental health service use (Cronbach’s alpha = .94). The total score was used as a predictor to examine parent adherence to recommendations. At the item level, a barrier was endorsed if parents rated the occurrence “A fair amount” (4) or “A lot” (5) and these barriers were presented to parents during enhanced feedback sessions.

#### *Expectations of Mental Health Care (EMHC)*

Using a 4-point scale, ranging from “Not at all” (1) to “A lot” (4), parents indicated how much they agreed with 29 items examining parent expectations of mental health services (Richardson, 2001). The EMHC was altered as described above for the BTPS. The Cronbach’s alpha for the current study was .87. At the item level, a barrier was endorsed if rated to occur “A fair amount” (3) or “A lot” (4) and these barriers were presented to parents during enhanced feedback sessions.

#### *Parent Follow-Up Interview*

This standardized phone interview created for this study was administered by research assistants who were unaware of parents’ assigned feedback condition. The interview was conducted 3 months following the feedback session. Parents were asked whether they took various steps for each recommendation, why they did or did not follow recommendations, and if anything in the feedback session was helpful in moving the parent to action. The three recommendations were: (1) sharing the screening results with the child’s teacher (assessed via seven *yes/no* questions); (2) sharing the screening results with the child’s medical doctor (assessed via six *yes/no* questions); and (3) obtaining a child assessment (assessed via 11 *yes/no* questions). Responses were used to calculate parent adherence to recommendations in two ways: (1) dichotomous adherence to each recommendation based on a response of yes on the item asking whether the parent shared results with the teacher, the medical doctor, or obtained an assessment and (2) the number of parent action steps taken based on summing items endorsed as yes for each of the three recommendations and across all recommendations on select items that demonstrated parent actions (e.g., call for appointment) toward adherence of the recommendations (teacher = six items; medical doctor = six items;

assessment = eight items). These items are listed in Table 3; those not involving a parent action were excluded (e.g., receipt of a report).

## Results

Of the 306 children identified as at risk for social, emotional, behavioral, and/or adaptive problems, 95 (31%) of parents attended a feedback session and 211 (69%) did not attend a feedback session. Of the 211 families, 33 (16%) scheduled a feedback session, but did not attend due to no-shows, snow days at school, or scheduling issues. Of the 95 parents who attended a feedback session, 61 (64%) completed the follow-up telephone interview (Standard: 37; Enhanced: 24). Independent-samples *t* tests and Chi-square analyses confirmed that those who did and did not complete the phone interview did not differ significantly on any variable assessed.

### Overall Adherence to Recommendations

Frequencies were calculated to determine what percentage of parents who completed the phone interview took important steps involved in adherence to each recommendation (Table 3). Across all parents who completed the phone interview ( $n = 61$ ), 67.2% reported sharing (based on dichotomous *yes/no* response) the screening results with their child’s teacher, 37.7% reported sharing the screening results with their child’s medical doctor, and 4.9% reported attending an assessment session (9.8% scheduled an assessment appointment, but some were pending). Sum scores based on the number of steps taken by parents as recorded from the parent follow-up interview (Table 3) indicated that across conditions, parents generally reported adhering to the greatest number of steps within the teacher recommendation ( $M = 2.61$ ,  $SD = 2.12$ ; of 6 steps), followed by the medical doctor recommendation ( $M = 1.72$ ,  $SD = 2.24$ ; of 6 steps), and followed by the assessment recommendation ( $M = .56$ ,  $SD = 1.50$ ; of 8 steps).

### Aim 1: Adherence to Recommendations by Standard versus Enhanced Feedback Condition

Chi-square analyses were conducted to examine whether parents in the standard and enhanced feedback conditions differed in whether they *shared the screening results* (based on dichotomous *yes/no* response) with the teacher and medical doctor. Results revealed no differences between standard (67.6%) and enhanced (66.7%) conditions with regard to sharing the screening results with their child’s teacher,  $\chi^2(1, N = 61) = .000$ ,  $p = ns$ . However, significantly more parents in the enhanced feedback



**Table 3** Percent of parents reporting completion of recommended steps

	Standard feedback ( <i>n</i> = 37) <i>N</i> (%)	Enhanced feedback ( <i>n</i> = 24) <i>N</i> (%)	Total feedback ( <i>n</i> = 61) <i>N</i> (%)
<b>Teacher recommendation</b>			
Tried to contact teacher	26 (70.3)	17 (70.8)	43 (70.5)
Set up meeting with teacher	12 (32.4)	10 (41.7)	22 (36.1)
Attended meeting with teacher	12 (32.4)	10 (41.7)	22 (36.1)
Shared screening results with teacher	25 (67.6)	16 (66.7)	41 (67.2)
Gave copy of results in person to teacher	8 (21.6)	6 (25.0)	14 (23.0)
Collaborated with teacher (developed a plan together, agreed to increase parent–teacher communication)	11 (29.7)	6 (25.0)	17 (27.9)
<b>Medical doctor recommendation</b>			
Tried to make appt with doctor	9 (24.3)	12 (50.0)	21 (34.4)
Set up appt with doctor	9 (24.3)	12 (50.0)	21 (34.4)
Attended appt with doctor	9 (24.3)	11 (45.8)	20 (32.8)
Share screening results with doctor	9 (24.3)	14 (58.3)	23 (37.7)
Gave copy of screening results in person to doctor	7 (18.9)	7 (29.2)	14 (23.0)
Met again with doctor regarding child concerns	2 (5.4)	4 (16.7)	6 (9.8)
<b>Assessment recommendation</b>			
Called to get assessment	5 (13.5)	5 (20.8)	10 (16.4)
Scheduled an appt for an assessment	3 (8.1)	3 (12.5)	6 (9.8)
Attended appt for the assessment	1 (2.7)	2 (8.3)	3 (4.9)
Shared results with professional	2 (5.4)	4 (16.7)	6 (9.8)
Completed assessment process	0 (0)	2 (8.3)	2 (3.3)
Met for feedback	0 (0)	2 (8.3)	2 (3.3)
Started recommendations	0 (0)	3 (12.5)	3 (4.9)
Started any new services/medication	0 (0)	2 (8.3)	2 (3.3)

condition (58.3%), as compared to the standard feedback group (24.3%), shared the screening results with their medical doctor,  $\chi^2(1, N = 61) = 5.79, p < .05$ . The effect size is  $w = .65$ , indicating a large effect size according to Cohen's standard (Cohen, 1988).

Independent-samples *t* tests of the sum scores were conducted to examine whether parents in the enhanced feedback condition completed significantly *more total action steps* in adhering to the recommendations than those in the standard feedback condition. Results showed no significant differences between standard and enhanced parents in the extent to which they adhered to the teacher recommendation  $t(59) = -.72, p = \text{ns}$  or the assessment recommendation  $t(28.80) = -1.38, p = \text{ns}$ . However, parents in the enhanced condition completed significantly more steps ( $M = 2.50; SD = 2.24$ ) for the medical doctor recommendation than those in the standard condition ( $M = 1.22; SD = 2.11$ ),  $t(59) = -2.26, p = .027$ . The effect size is  $d = .59$ , indicating a medium effect (Cohen, 1988). Results showed a marginally significant difference

between standard ( $M = 4.27; SD = 3.90$ ) and enhanced ( $M = 6.67; SD = 5.65$ ) parents in the extent to which they adhered to all three recommendations combined  $t(59) = -1.96, p = .054$ .

### Aim 2: Predictors of Parent Adherence to Recommendations

Predictors of parent adherence to the assessment recommendation could not be analyzed as only three participants in total followed the recommendation to have their child comprehensively evaluated. Thus, only predictors of parent adherence to teacher and medical doctor recommendations were evaluated. Two hierarchical logistic regressions were conducted (one for teacher recommendation; one for medical recommendation). The outcome variable for each regression analyses was whether or not the parent *shared the screening results* with the teacher (or medical doctor). For each hierarchical logistic regression, the feedback condition was entered on the first block. The second block

consisted of the Hollingshead SES total score, the BASC-2 behavioral severity index (BSI) score (average of parent and teacher BSI), parent recognition of problem (yes/no), whether the child was receiving help for the problem (yes/no), and the barriers to participation scale (BTPS) total score. The rationale for this order was (a) to understand the unique impact of the feedback condition and (b) to account for factors previously identified as either correlates or predictors of service use (MacNaughton & Rodrigue, 2001) to determine if these demographic factors or barriers best predict adherence.

#### *Predictors of Parent Adherence to Teacher Recommendation*

The first block (feedback condition) was not statistically significant. The second block (SES, BSI, problem recognition, receiving help, and BTPS) was significant,  $X^2(5) = 14.64$ ,  $p = .012$ . Betas indicated parents who received help prior to screening were more likely than those who did not to share screening results with the teacher and that parents with lower barriers (BTPS) were more likely than parents with higher barriers to share the screening results with the teacher (see Table 4).

#### *Predictors of Parent Adherence to the Doctor Recommendation*

The first block (feedback condition) was marginally significant,  $X^2(1) = 3.79$ ,  $p = .051$ . The beta suggests a positive association between the enhanced condition and sharing the results with their doctor. The second block

entered into the model (SES, BSI, problem recognition, receiving help, and BTPS) was not statistically significant (see Table 4).

## Discussion

This study contributes to the literature by (a) evaluating the impact of an individualized, parent feedback session following a school-based mental health screening, (b) examining the extent to which a feedback session that directly addresses barriers to mental health services, results in greater adherence to recommendations relative to a standard feedback session in which barriers were not addressed, and (c) identifying predictors of adherence to recommendations. The results indicate the engagement strategy (enhanced feedback) increased parent adherence to sharing screening results with medical doctors. Regression analyses indicated that parents' previous service use predicted adherence to the sharing screening results with teachers. Once the feedback condition was taken into account, barriers were not a significant predictor of adherence to either the teacher or medical doctor recommendation.

Before examining the effects of the feedback conditions, it is important to consider two overarching findings. First, fewer than half of the parents whose child screened positive recognized their child was at risk for or was demonstrating social, emotional, behavioral, or adaptive problems (see Table 1; believes child has a problem). The method of detection (i.e., elevation on any subscale) may have contributed to this finding, as well as the possibility that a

**Table 4** Hierarchical logistic regression for predicting sharing results with teacher and doctor

Variable	Teacher				Doctor			
	Block 1		Block 2		Block 1		Block 2	
	B	$X^2$	B	$X^2$	B	$X^2$	B	$X^2$
Feedback	-.22	.14	-.29	.15	1.11	3.67	1.05	2.58
Hollingshead SES			.05	1.72			-.01	.07
BSI			-.05	.73			-.01	.08
Problem recognition			-1.92	3.30			-.80	.70
Receiving help			2.98	4.41*			1.70	3.08
BTPS			-.05	5.67*			-.02	.99
Block Chi square	.14		14.64*		3.79		5.96	
Degrees of freedom	1		5		1		5	
Final model Chi square			14.77*				9.75	

$N = 53$  as 6 participants were not included due to missing data

BSI behavioral severity index on the behavior assessment system for children (BASC-2), BTPS barriers to participation scale

\*  $p < .05$

portion of these children may be typically developing and not develop problems (i.e., false positives). However, the pattern is consistent with previous literature (e.g., Teagle, 2002) and highlights the utility of universal screening in the early stages of parent help-seeking model (i.e., problem recognition). Second, 60% of parents who were informed that their child was at risk did not attend a feedback session to obtain results. This is concerning as it highlights the challenges schools face with parent engagement and the need for this research. This is the first study to explore parent engagement early in the help-seeking continuum (i.e., at the problem recognition stage prior to the start of services) and our discussion below offers insights about parent engagement in services following universal school-based screenings.

### Adherence to Recommendations

Of the 61 parents (across both feedback conditions) who participated in telephone follow-up, only 31% believed their child had a problem and only 40% spoke to someone about concerns for their child at the time of consent. However, at the time of follow-up, 67% of these parents had shared the screening results with their teacher, 38% had shared the results with their medical doctor, and 10% had scheduled or attended an assessment appointment. These results suggest that, in alignment with the goals of the session and help-seeking model, parents who attended feedback sessions experienced significant increases in problem awareness and help-seeking as a function of the feedback meeting. Further, it is noteworthy that more parents adhered to the recommendation to share the screening results with the teacher (67%) than the recommendation to share results with the doctor (38%) or to obtain an assessment (10%; scheduled or attended). Perhaps this is a function of ease of access to the teacher. Given that no school-based studies have examined adherence to recommendations following feedback for parents of children who are at risk for a range of problems, this study offers a comparison point for future studies.

### Standard Versus Enhanced Feedback

The majority of parents in both the standard and enhanced conditions reported they tried to contact the teacher and/or shared the screening results with him/her (see Table 3), with no effect of condition. In contrast, parents in the enhanced condition completed significantly more action steps involved in following the medical doctor recommendation than those in the standard condition (Cohen's  $d = .59$ ), and significantly more parents in the enhanced feedback condition shared the screening results with their medical doctor, compared to parents in the standard

feedback condition (Cohen's  $w = .65$ ). A similar trend, albeit not significant, was present for the assessment recommendation. The latter two findings support the hypothesis that enhanced feedback would facilitate additional help-seeking episodes by helping parents overcome barriers (structural or perceptual) to service engagement.

This pattern across the three recommendations replicates previous work (MacNaughton & Rodrigue, 2001) and may reflect the potency of the enhanced feedback session. Namely, there are fewer barriers associated with sharing screening results with the teacher (relative to the medical or mental health professional), as parents may have more frequent contact and easier access to teachers. In contrast, sharing results with the medical doctor may involve more barriers (e.g., lack direct access, formal scheduling procedures, fear of diagnosis or medication). The enhanced feedback procedures may have helped to reduce these structural or perceptual barriers via the process of exploring parent reactions (e.g., fears/perceptions about costs and benefits) and problem-solving barriers to action steps. However, perhaps the structural (e.g., insurance coverage; lengthy assessment appointment) and perceptual barriers (stigma related to mental health; perception that problem is not “that bad”) to seeking a comprehensive assessment are more significant and the enhanced feedback session was not enough to mobilize parent action. Indeed, perhaps more help-seeking episodes are needed before this action could occur (e.g., multiple teachers report concern, obtaining information about payment options). Thus, future studies could examine parents over a longer period and examine factors that differentially predict response to different recommendations (e.g., more help-seeking episodes; degree to which barriers are reduced).

### Predictors of Adherence

In contrast to our hypothesis, the results of the regression analyses showed that after controlling for feedback condition, the total barriers score was not a significant predictor of parent adherence to the teacher and medical doctor recommendation. Interestingly, however, previous service use was a significant predictor of sharing results with the teacher. It is possible that past help-seeking episodes may increase the likelihood for future help-seeking episodes, such that each episode may serve to create momentum toward service engagement. For families with prior help-seeking episodes or contemplation, our feedback session may have served as the catalyst to further action, whereas for families early in the help-seeking process, our feedback session may have been their first help-seeking episode, but not one that resulted in action. Thus, in future studies, past service use and identification of where

families are in the early help-seeking process may determine the type of engagement activities most useful for each family.

### Limitations and Future Research Directions

First, the screening did not include all kindergarten children enrolled and as such, the profile of at-risk children and families may have looked different had all families participated. Similarly, the results from rural, Caucasian, low-income at-risk families may not generalize to other populations. Further, the “at-risk” group encompassed a heterogeneous group of children and parents with regard to problem type, severity, and stage of help-seeking. Thus, various engagement strategies and the role of barriers may not have had equal impact across these families. Future studies could target families at certain stages of help-seeking or change, involve cluster analytic techniques to identify parents similar on types of barriers, and explore specific barriers associated with different recommendations to shed light on differences in rates of adherence and develop tailored engagement interventions. Next, the multiple components (universal mental health screening, normal/at-risk letters, feedback sessions) provided to participating families in this study are *substantially more* than what most schools offer (Romer & McIntosh, 2005). Given the unique contributions of the screening, letter, and feedback session components were not assessed in this study, we cannot attribute group differences to the feedback sessions alone. On a related note, the lack of a no-feedback control group limited our ability to assess the overall value of providing feedback to parents following screening. This limitation is especially important as the standard and enhanced conditions shared a great deal of content. Future research should examine the effects of receiving feedback relative to a control group where no feedback meeting is provided, as well as compare the impact of simply sending a letter to communicate risk status to more formal engagement efforts to dismantle the unique contribution of each component provided in the enhancement. Importantly, risk status was determined by a screening measure and not a comprehensive evaluation. Thus, it is likely that some parents whose children were identified did not have problems (i.e., were false positive cases) or had other difficulties that were not primarily social, emotional, or behavioral (e.g., speech or health difficulties). Further, the feedback sessions were not coded for integrity, including the length of sessions. This would have offered increased confidence in both the quality of the enhanced feedback sessions and a distinction between each condition. Future research could improve upon the current methodology by taking such measures.

Additionally, via qualitative analyses, researchers could further define and examine the adherence steps parents follow. The results may shed light on unanswered questions such as why parents were most likely to adhere to the teacher recommendation or why differences exist between groups on the medical doctor recommendation, but not the teacher recommendation. Finally, in the current study, child severity, but not other variables were considered during randomization procedures. Although it was determined that our groups were equivalent on all other factors as well, it may be valuable to use variables such as parent barriers or past parent experiences as part of randomization in future studies.

### Implications for School Mental Health Professionals

Although results from this study warrant further replication before direct implications can be offered, our findings offer new insights and highlight fruitful avenues for future research. First, this study provides preliminary evidence that universal screening coupled with a parent feedback session has the potential to increase problem awareness and help-seeking episodes among parents of youth at-risk for social, emotional, and behavioral problems. The rates of problem recognition and help-seeking among parents who are early in the process offers a point of reference against which rates in future studies could be compared. It also reveals the significant efforts needed to engage parents in this process. For example, a significant portion did not attend the feedback session. Future studies could evaluate various strategies for further engagement. For example, it may be important to engage parents earlier; perhaps at the point in which parents learn about screening (e.g., at kindergarten registration). School personnel could develop a parent-friendly name for the screening program, have a valued member of the school community (teacher or parent), introduce the program, and explain in greater detail the benefits of screening for parents and children. Additional steps could be taken to improve the feedback session (e.g., inviting parents to feedback via phone rather than letter, using parent-to-parent contact as in Atkins et al., 2003, 2006). Further, consideration should be given to whether a greater “dose” of the engagement intervention would lead to greater adherence and what a larger dose would involve (e.g., multiple feedback sessions, in-person follow-up appointments). The development of the Family Check-Up (FCU) by Dishion and colleagues (2014) may serve as a guide for how to expand on the initial engagement session.

Second, our results suggest the enhanced feedback session uniquely promoted help-seeking from medical doctors. However, the pattern of results also reveals that specific problem-solving processes may be needed for different barriers (i.e., using motivational interviewing with

a parent who does not believe the child is having problems or that problems will be outgrown; structural barriers such as transportation or insurance may require a different process). Additionally, because barriers may be unique to each system (i.e., schools, health clinics, mental health clinics), specific processes may be needed to promote help-seeking episodes with different professionals (e.g., overcoming stigma perceptions or lack of understanding of mental health services). Another consideration would be to promote the expansion and type of services provided in schools to reduce structural barriers and by increasing access and exposure, possibly reduce attitudinal barriers as well. This process could be supported by any programming whereby mental health promotion can be imbedded into education, including colocation of mental health services within school settings.

Third, the results of this study provide support that enhanced feedback may be promising for increasing communication and help-seeking. As researchers continue to explore the value of enhanced feedback, school mental health professionals and other school staff should provide suggestions and feedback on the design and feasibility of such an approach. For example, obtaining considerations for school climate and procedures, capacity to work with at-risk children, and whether school registration, open houses, and/or parent–teacher conference nights would serve as key times to screen and/or provide enhanced feedback sessions. This process should include exploring key components of an engagement intervention that are supported by the literature (see Table 2; assisting parents in recognizing the problem; inquiring about parents' reaction to results, previous experiences with services, and barriers; addressing barriers when feasible) and considering how it could be applied. One way schools may feasibly implement these components would be to offer the first part (recognition of problem) in a small group format led by one professional where parents can be educated about the interpretation of scores and view their own results. The second part could involve individual meetings (one parent meets with one professional) to communicate about specific reactions, experiences, barriers, and questions. Perhaps only a portion of parents could participate in the individual meetings based on criteria that may suggest difficulty adhering to recommendations (e.g., initial report of multiple barriers, no prior service use, many questions following group format). Holding individual meetings may be deemed “excessive” by some school personnel; yet, this approach is consistent with providing culturally competent care when assessing children in the context of schools (Clauss-Ehlers, Serpell, & Weist, 2013) as it involves being responsive to the unique screening results, experiences, and barriers experienced by each child and parent. In fact, individual meetings with parents and providing feedback

about social, emotional, and behavioral functioning occur daily in every school. Some meetings result in successful communication, help-seeking, collaboration, and intervention. However, the data are very clear that our communication of results and recommendations with parents is often insufficient, leaving many children with unmet mental health needs. Schools have developed many procedures and standards for academic curricula and testing, yet no best practices exist for providing parent feedback. Discussion from front-line school mental health professions about how feedback is traditionally given and how it may be enhanced is necessary and should be incorporated into the development and research of programs designed to enhance feedback for parents.

## Conclusions

This study uniquely provided preliminary support for the effect of a school-based engagement strategy on adherence to recommendations among parents primarily in early stages of help-seeking. Namely, an enhanced feedback session showed an increase in parent adherence to sharing screening results with medical doctors. Additional results showing increased rates of problem recognition and parent help-seeking with a variety of professionals at follow-up, compared to rates prior to the screening. However, given the overall rates of participation, additional strategies for engaging parents following determination of risk status should be explored, including how to best reach families who are unable or unwilling to attend a feedback session to learn about next steps to help their at-risk child. Exploring avenues to reduce parental barriers to service utilization to facilitate parent adherence to recommendations can potentially change the negative developmental trajectories of young children who are at risk for the development of mental health problems.

## Compliance with Ethical Standards

**Ethical Standards** All procedures performed in the studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendment or comparable ethical standards.

**Informed Consent** Informed consent was obtained from all individual participants included in the study. This article does not contain any studies with animals performed by any of the authors. This research was not grant-funded.

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