

SPRCC Early Career Scholar Application

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My research program falls under the umbrella of behavioral consultation. In particular, I am interested in functional behavior assessment (FBA) and treatment integrity in applied settings. My interest in FBA is multifaceted and includes psychometric evaluation of the Functional Assessment Informant Record (FAIR) series (e.g., Doggett, Edwards, Moore, Tingstrom, & Wilczynski, 2001; Dufrene, Doggett, Henington, & Watson, 2007) and treatment utility of FBA in preschool settings. Research interest in treatment integrity includes evaluating teacher and staff training procedures with regard to maintained and generalized implementation.

Historically, applied behavior analysts have neglected to evaluate psychometric properties of FBA informant instruments (Floyd, Phaneuf, & Wilczynski, 2005). The FAIR series of FBA informant instruments includes teacher, preschool, parent, and student forms (Doggett et al., 2001; Dufrene et al., 2007). Preliminary research has demonstrated convergent validity and treatment utility for teacher and preschool forms. However, further psychometric evaluation should include classical test theory as well as evaluation of generalizability theory. Establishing technical adequacy of the FAIR series and subsequent standardization of administration and scoring procedures would pave the way for dissemination of instruments for use in applied settings (e.g., schools). Currently, the Motivation Assessment Scale (MAS; Durand & Crimmins, 1992) and the Questions About Behavioral Function (QABF; Matson & Vollmer, 1995) are the only two FBA informant instruments that include empirical demonstration of psychometric properties. Unfortunately, the MAS and QABF were developed for use with individuals with developmental disabilities in restrictive settings. Therefore, there is a great need for FBA informant instruments for use in traditional school settings.

I am also interested in the evaluating the treatment utility of FBA in preschool settings with at-risk students. While there is extensive empirical support for function-based interventions

effectively reducing disruptive behaviors, scant research has been conducted directly comparing function-based interventions to evidence-based interventions that are not based on behavioral function (Gresham, McIntyre, Olson-Tinker, Dolstra, McLaughlin, & Van, 2004). To that end, I am currently directing two studies comparing function-based interventions to evidence-based interventions that are not matched to function. Future projects will also include variations of function-based interventions and impact on increases in appropriate replacement behaviors.

In addition to my interest in FBA, I have long been interested in treatment integrity in applied settings. In particular, I am interested in teacher and staff training procedures that result in maintained and generalized intervention implementation. I have recently completed a study which included direct-training procedures (i.e., use of bug-in-the-ear device) for praise and effective instruction delivery in Head Start classrooms. Results indicated that following direct-training with a one-way radio device, teachers' rate of praise and use of effective instruction delivery increased and was maintained for more than one-month following training. Moreover, children's rate of disruptive behavior decreased as a result of increased praise and effective instruction delivery. I am currently replicating that study in middle school alternative classrooms that include students with Serious Emotional Disturbance (SED). Future research will replicate and extend this line of research as well as explore behavioral mechanisms responsible for maintained and generalized implementation. Research evaluating novel teacher and staff training procedures is certainly relevant for the field of school psychology given research demonstrating treatment implementation failures in schools (e.g., Witt, Noell, LaFleur, & Mortenson, 1997).

References

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Abstract

Previous functional behavior assessment research has included evaluation of function-based interventions for reducing disruptive classroom behaviors. Unfortunately, little attention has been paid to comparing function-based interventions to evidence-based interventions that are not function-based. Moreover, most studies have failed to evaluate function-based interventions in terms of increasing adaptive replacement behaviors. The current project is intended to identify a series of studies that include rigorous evaluations of the treatment utility of functional behavior assessment. In particular, direct comparisons of function and non-function based interventions will be made using single-case experimental designs. Additionally, direct-comparisons of various forms of function-based interventions (e.g., differential reinforcement of other behavior and differential reinforcement of alternative behavior) will be made in order to evaluate effects on disruptive behaviors as well as adaptive replacement behaviors.

Treatment utility of assessment refers to the extent to which assessment data are linked to effective intervention (Hayes, Nelson, & Jarrett, 1987). Functional behavior assessment (FBA) includes a range of procedures used to identify antecedents for and the reinforcing contingency of a particular behavior (Gresham, Watson, & Skinner, 2001). Assessment data are then used to develop an intervention package that alters the individual's environment in an effort to reduce the target behavior. Behavior analysts have long touted the treatment utility of FBA. However, the body of research evaluating FBA does not include rigorous evaluation of treatment utility. Specifically, scant research has included direct-comparisons between function-based interventions and evidence-based interventions that are not function-based (Gresham, McIntyre, Olson-Tinker, Dolstra, McLaughlin, & Van, 2004). Additionally, social validity (Gresham & Lopez, 1996) of function-based interventions is lacking as few studies have evaluated the extent to which function-based intervention packages have resulted in increases in adaptive replacement behaviors.

Given the limitations in FBA research described above, it is important that programmatic research is conducted that more fully evaluates the treatment utility of FBA. The purpose of the current proposal is to outline a series of studies that will rigorously evaluate treatment utility of FBA. First, direct-comparisons of function-based and evidence-based interventions that are not function-based will be compared. Next, direct comparisons of various function-based intervention packages will be conducted in order to evaluate their relative impact on decreasing target behaviors while simultaneously increasing adaptive replacement behaviors.

Direct comparisons of function and non-function-based interventions will use single-case experimental designs (e.g., Alternating Treatments Design). Intervention packages based on function will include Differential Reinforcement of Other Behavior (DRO) with extinction.

Non-function-based interventions will include evidence-based procedures that are not indicated by the FBA. For example, for students whose behavior is maintained by access to attention or escape from demands, token economies that provide access to tangibles and activities may be used for comparison. For students whose behavior is maintained by access to tangibles and activities, interventions employing contingent praise or breaks may be used for comparison. Interventions' relative effectiveness will be evaluated by examining impact on target and adaptive replacement behaviors.

In terms of addressing the social validity of function-based interventions, various function-based intervention packages will be compared to evaluate relative effectiveness for reducing target behaviors while simultaneously increasing occurrence of adaptive replacement behaviors. Comparisons will be made using single case experimental designs (e.g., ATD). Traditional function-based intervention packages (e.g., DRO with extinction) may be compared to intervention packages including Differential Reinforcement of Alternative Behavior (DRA) with extinction. Additionally, multiple DRA packages may be developed that include various antecedent strategies (e.g., pre-correction, direct-training for alternative response).

The proposed line of research primarily includes single-case experimental designs. As such, there is no prerequisite number of participants for each particular study. However, external validity of results will certainly be enhanced through multiple participants across a range of demographic characteristics. Increasing external validity of findings will no doubt be aided by collaborating with multiple researchers across sites. Additionally, multi-site collaboration is deemed important in participant recruitment as relatively few FBAs are conducted within one particular school building. Finally, multi-site collaboration will increase the likelihood that

sufficient data are available for conducting meta-analyses of single-case experimental design studies.

While there are many advantages to multi-site collaboration, there are potential difficulties in conducting such research. FBA and intervention research across multiple sites presents unique challenges. Primarily, it may difficult to standardize FBA and intervention procedures given variability in state and local regulations regarding FBA and intervention procedures. However, it is believed that collaboration with senior researchers will provide expertise necessary to problem-solve and troubleshoot any such difficulties that are encountered.

Budgetary estimates and brief specifications are provided in the table below:

Personnel	Travel	Stipends	Commodities/Equipment	Total
\$21,000	\$8,000	\$30,000	\$1,000	\$60,000
PI release to consult and direct research activities (1/3 time)	PI travel for training & consultants' travel stipend	2 twelve month graduate student stipends	Phone charges; copying protocols, questionnaires; mailings, etc.	

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