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Teacher Nominations and the Identification of Social,
Emotional, and Behavioral Concerns
in Adolescence

Stephanie Deverich Davis

A dissertation submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of
Doctor of Philosophy

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ABSTRACT

Teacher Nominations and the Identification of Social, Emotional, and Behavioral Concerns in Adolescence

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Emotional and Behavioral Disorders (EBD) directly influence learning, relationships, mood, and overall scholastic experiences. Research provides evidence that early intervention and prevention efforts can address the needs of students with EBD (Allen-DeBoer, Malmgren, & Glass, 2006; Cook, et al. 2008; Lien-Thorne & Kamps, 2005; Regan, Mastropieri, & Scruggs, 2005; Rivera, Al-Otiba, & Koorland, 2006), but in order to identify these at-risk youth, a screening system is needed to broadly consider Social, Emotional, and Behavioral Concerns (SEBC).

This dissertation evaluated the alignment of a teacher nomination process (Teacher Nomination Form (TNF)) and a normative screener of EBD risk (BASC-2 Behavioral and Emotional Screening System (BESS), Kamphaus & Reynolds, 2007). Teacher nominations and rankings were significantly correlated to the BESS in the internalizing (.177), externalizing (.246), and combined categories (.304) groups. Multiple teacher nominations were not significantly related to BESS scores. Social validity evidence was gathered and interpreted.

Keywords: emotional and behavioral disorders, school-based screening, universal screening, teacher nominations, BASC-2 BESS, at-risk populations, adolescents

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TABLE OF CONTENTS

| | |
|----------------------------------------------------------------------------------------------------------|----|
| Introduction..... | 1 |
| Social Emotional and Behavioral Concerns vs Emotional and Behavioral Disorders ... | 1 |
| EBD Overview | 3 |
| Positive Behavioral Support | 6 |
| Interventions Overview..... | 7 |
| Current EBD/SEBC Screening Measures..... | 8 |
| Purpose of the Study..... | 9 |
| Method..... | 13 |
| Preliminary Research | 13 |
| Data Collection | 15 |
| Teacher Nomination Form | 16 |
| Behavior Assessment System for Children, Behavioral and Emotional Screening System (BASC-2 BESS)..... | 17 |
| Social validity form | 18 |
| Procedures..... | 18 |
| Data Analysis | 20 |
| Rankings | 20 |
| Number of teacher nominations | 20 |
| BASC-2 BESS..... | 20 |

| | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| Social Validity Form. | 21 |
| Research Questions..... | 21 |
| How does the ranking on the TNF in the internalizing category predict the level of BASC-2 BESS T-score? | 21 |
| How does the ranking on the TNF in the externalizing category predict the level of BASC-2 BESS T-score? | 21 |
| How does the ranking on the TNF in the combined category predict the level of BASC-2 BESS T-score? | 22 |
| Is there a significant difference in BASC-2 BESS T-scores between those nominated by 1 teacher and those nominated by 2 or more teachers? Is there a significant difference in BASC-2 BESS T-scores between those nominated by 1, 2, 3, 4, and 6 teachers?..... | 22 |
| How does combination of (1) number of teachers that nominated a student and (2) the rankings of teachers predict the level of BASC-2 BESS T-score? | 23 |
| What pragmatic value does this process have according to teachers? | 23 |
| Results..... | 25 |
| Preliminary Statistical Analyses of Screening Measures..... | 25 |
| Effect of internalizing TNF ranking on prediction of BASC-2 BESS T-score | 25 |
| Effect of externalizing TNF ranking on prediction of BASC-2 BESS T-score..... | 25 |
| Effect of combined TNF ranking on prediction of BASC-2 BESS T-score..... | 26 |
| Effect of number of teacher nominations on prediction of BASC-2 BESS T-score | 26 |

| | |
|------------------------------------------------------------------------------------------------|----|
| Effect of multiple nominations and level of ranking on prediction of BASC-2 BESS T-score | 27 |
| Teacher's report of pragmatic value of the screening process | 28 |
| Free-response Teacher Feedback | 29 |
| Theme 1: BASC-2 BESS adequacy. | 29 |
| Theme 2: Use of school data. | 30 |
| Theme 3: Insufficiency of identification. | 31 |
| Theme 4: Difficulty answering the SSSVF. | 31 |
| Summary | 32 |
| Discussion | 33 |
| Reflections on Findings | 33 |
| Number of teacher nominations. | 33 |
| Ranking of teacher nominations. | 35 |
| Social validity. | 37 |
| Limitations | 38 |
| Implications for Future Research | 39 |
| Implications for School Screening | 40 |
| Conclusion | 41 |
| References | 43 |

TABLES

| | |
|---------------------------------------------------------------------------|----|
| Table 1: Sample Demographics: Teachers | 61 |
| Table 2: Sample Demographics: Students | 62 |
| Table 3: Correlation between BASC-2 BESS scores and Teacher Rankings..... | 63 |
| Table 4: Mean BASC-2 BESS scores by Number of Teacher Nominations..... | 64 |
| Table 5: Central Tendency and SD of Social Validity Scores..... | 65 |
| Table 6: Internalizing Type 1 Error | 66 |
| Table 7: Externalizing Type 1 Error | 67 |
| Table 8: Combined Type 1 Error | 68 |

FIGURES

Figure 1: Positive Behavioral Support Triangle 69

APPENDICES

Appendix A: Teacher Nomination Form 70

Appendix B: Social Validity Form 73

Appendix C: Literature Review 74

Introduction

School-wide screening is an important process that identifies youth who may be experiencing Social, Emotional, or Behavioral Concerns (SEBC) and may need a variety of intensity of services such as small-group support, additional in-class support, or services provided by the Special Education classification of Emotional and Behavioral Disorder (EBD). Through early identification of at-risk students, intervention strategies can lead to efficient use of school resources (Johnson, Mellard, Fuchs, & McKnight, 2006; Walker, Cheney, Stage, Blum, & Horner, 2005) and, more importantly, the prevention and early intervention of maladaptive behaviors. When screening leads to effective early intervention, struggling students are given opportunities for support that facilitate positive change. This allows educators to address the needs of students before behaviors become entrenched and difficult to modify.

Without interventions, students with EBD experience some of the lowest levels of academic achievement as they are more likely to be suspended, miss school, fail classes, and drop out (Landrum, Tankersley, & Kauffman, 2003). Clear evidence that supports the efficacy of intervention in improving the academic experience of children with EBD exists (Allen-DeBoer, Malmgren, & Glass, 2006; Cook, et al., 2008; Lien-Thorne & Kamps, 2005; Regan, Mastropieri, & Scruggs, 2005; Rivera, Al-Otiba, & Koorland, 2006). In the long-term, academic improvement leads to greater self-esteem and an increased likelihood of future career prospects (Hazell, 2007). It is hoped that through early identification and intervention some students will not need to experience the negative outcomes related to EBD.

Social Emotional and Behavioral Concerns vs Emotional and Behavioral Disorders

The goal of this research is to help identify students who are at-risk for EBD but this project uses the term Social, Emotional and Behavioral Concerns (SEBC) in order to help

teachers broadly screen for risk. SEBC is a term used to describe a general area of student concerns, without classifying a student with a specific disorder or a special education classification. Students with SEBCs will have the same types of concerns as those with EBD, but to a lesser degree and they may or may not require special education services. The benefit of screening for SEBC is that it facilitates that identification and interventions for students who may not meet the strict criteria for EBD but would benefit from school-based interventions.

This research attempts to engage in universal screening, rather than diagnosis. Screening is intended to use indicators as a means to identify students who may be facing potential problems, whereas a diagnostic tool is intended to diagnose the symptoms of a person who is already manifesting a specific problem (Glover & Albers, 2007; Young, Caldarella, Richardson, & Young, 2011). By screening for students with SEBC, students with concerning risk behaviors may be identified, rather than only identifying(diagnosing) those students who meet the qualification for the special education classification of EBD. Only about 5% of the school population is served by special education (Walker et al., 2005) but approximately 33% of school-aged students use school or community services for mental health concerns (Farmer, Burns, Philip, Angold, & Costello, 2003). By broadly considering students with at-risk behaviors a school can identify those students who are at-risk for EBD while also identifying and providing interventions for those students with more general SEBCs that may not reach the level of an EBD.

EBD Overview

This research uses the term SEBC to broadly screen for at-risk behaviors, but the goal of this research is to identify students who are at-risk for EBD, which is a diagnostic and severe form of SEBC. By understanding the EBD risk-factors one can understand some of the features of SEBC as well as understand the need for preventative SEBC screening. The category of EBD is considered to capture those students who have a variety of severe behavioral and emotional concerns. Special education law defines an Emotional and Behavioral Disorder as

(A) An inability to learn that cannot be explained by intellectual, sensory, or health factors. (B) An inability to build or maintain satisfactory interpersonal relationships with peers and teachers. (C) Inappropriate types of behavior or feelings under normal circumstances. (D) A general pervasive mood of unhappiness or depression. (E) A tendency to develop physical symptoms or fears associated with personal or school problems" (Code of Federal Regulations, 2012, Title 34, Section 300.7(c)(4)(i)).

EBD is considered to have two distinct, but not mutually exclusive, means of being displayed: internalizing and externalizing symptoms. Students with internalizing behaviors tend to express themselves through inward displays of emotion such as depression, anxiety, somatic problems, and social withdrawal (Daughters et al., 2009; Maschi, Morgen, Bradley, & Hatcher, 2008; Merrell & Dobbmeyer, 1996; Reynolds, 1990). In contrast, students with externalizing EBD outwardly express their feelings and are more disruptive, oppositional, and aggressive (Emens, 2008; Maschi et al., 2008). Teachers frequently notice externalizing students because the student behaviors interrupt class time (Lane, Parks, Kalberg, & Carter, 2007). When considering both the internal and external categories, there are many areas of concern regarding EBD if it is left untreated (Kern, Hilt-Panahon, & Sokol, 2009). Five areas of concern discussed in this paper are

academic failure, poor social connections, future problems (i.e., lower graduation rates and successful employment), disruptive class behavior, and cost-effectiveness.

First, regarding academic success, students with EBD have difficulties learning and managing educational demands (Cullinan & Sabornie, 2004) and are found to experience the lowest levels of academic success, even when compared to students with other educational disabilities (Landrum et al., 2003). Given their low rate of academic success and other issues, 51% of those identified with EBD drop out of school (U.S. Department of Education, 2002) and only one in five students with EBD will attend a postsecondary school (Wagner, Kutash, Duchnowski, Epstein, & Sumi, 2005). Furthermore, these students, despite their academic problems, often find themselves removed from the classroom due to externalizing behaviors, thus increasing their academic deficiency (Jolivette, Stichter, Nelson, Scott, & Liaupsin, 2000).

A second concern is the lack of social competency associated with EBD (Lane & Carter, 2006). Those with EBD have greater difficulty maintaining healthy social relationships. They often experience rejection due to social deficiency (Lane, Gresham, & O'Shaughnessy 2002; Murray & Greenberg, 2006), which furthers the plight of students with EBD. A positive social environment within schools, specifically having friends, is associated with feeling safe and enjoying classes (Jacobsen, 2009). However, social isolation is associated with lowered self-esteem and depressive thoughts (Hall-Lande, Eisenberg, Christenson, & Neumark-Sztainer, 2007), creating an environment in which it is difficult to have positive learning experiences.

Students with EBD are also likely to face negative problems in the future. The vocational success of those experiencing EBD is markedly different from those who do not experience this disorder (Bullis & Cheney, 1999). It seems that school related failure engulfs students with and at risk for EBD, lowering their future prospects. Even if employed, those with EBD have less job

stability than the average population (Wagner et al., 2005). Early prevention may be an effective way to help, as research has proven that “poor academic performance pushes students to drop out of school, hinders access to postsecondary education opportunities, and restricts later employment and career opportunities” (Lane & Carter, 2006, p. 67).

A fourth reason why screening is important lies in alleviating problematic classroom behaviors that affect other students and teachers. Those who have EBD may act out disruptively during classes, thus impeding the progress of other students (Carrell & Koekstra, 2009; Seidman, 2005). Although it is important to consider those with EBD, the needs of other students in the class must be mentioned with regards to the negative impact of an acting-out child. Teachers find dealing with behavioral problems a very difficult aspect of their job that often leads to burnout (Lopez et al., 2008). When teachers reach the point of burnout they are less likely to implement behavioral interventions (Pas, Bradshaw, & Hershfeldt, 2010). Alternatively, if behavioral concerns are addressed early through effective intervention, teachers may find their job less strenuous (Jennings & Greenberg, 2009; Maag, 2008), increasing their ability to help youth with disabilities more effectively.

A final point is the cost-effective nature of early interventions. By intervening when behaviors are responsive to intervention, future problems and future costs may be mitigated. The longer educators wait to intervene, the more resources are needed to support students and address their needs. As mentioned before, many students with EBD drop out of high school, thus limiting their future career opportunities and requiring more resources to help them in their adult life as well. The federal government spends approximately \$250 billion on high school dropouts later in life (Lunenburg, 1999). If early intervention occurs, steps can be taken to improve social and vocational skills for students with EBD, thus lessening future difficulties.

Positive Behavioral Support

In order to intervene and improve the outcome of students with SEBC and identify students who are at-risk for developing EBD, an effective and efficient means of identifying the needs of students is necessary. Due to the severity of possible consequences without timely intervention, screening can be a meaningful endeavor in today's schools. One approach to screening occurs within the Positive Behavioral Support (PBS) model of prevention and early intervention (Walker et al., 2005). School teams that fully implement a typical PBS model provide a continuum of services to meet the needs of all students. A universal screening system initially considers all students as potentially at risk and casts a wide net in order to identify all students who may potentially be at risk. Multiple gates (varying tests, procedures, and observations) are used in order to distinguish between those who need moderate help from those who need more intensive interventions (Glover & Albers, 2007).

The PBS model uses a multi-tiered system of support with increased intervention intensity as tiers increase (Sugai & Horner, 2002; Walker et al., 2005, see Figure 1). Tier 1 support encompasses about 80% of students, meeting their needs through school-wide interventions such as school violence education (Enger, Howerton, & Stepp, 1994), prosocial behavior lessons (Kidron & Fleischman, 2006), and literacy training (Lane & Menzies, 2002). Typically, Tier 2 includes about 5-10% of students who require short-term small group instruction or other targeted interventions to learn positive skills (Fairbanks, Simonsen, & Sugai, 2008). Finally, Tier 3 includes 1-5% of students, meeting their needs through intensive, individualized interventions. Typically, the needs of these students are understood through the completion of a Functional Behavioral Assessment (FBA), which usually includes interviews,

observations, and staff input. FBAs facilitate a comprehensive view and plan for individual students with Tier 3 needs (Kern et al., 2009).

This model serves as a guide to schools by helping them meet the individualized needs of students through multiple levels of intervention (Lane & Beebe-Frankenberger, 2004). Through a tiered service delivery model, a continuum of services is used to address students' needs rather than using the 'wait-to-fail' methodology in which students are not identified or provided with responsive services until they have failed academically, socially, emotionally, or behaviorally (Glover & Albers, 2007). Screening is a vital process for understanding what level of services students need.

Interventions Overview

Once the needs of students have been appropriately identified through screening, school teams can begin to design and implement services to fit the specific needs of a variety of students. Research on SEBC and EBD finds that interventions like social skills training (Barreras, 2008; Kamps, Kravits, Rauch, Kamps, & Chung, 2000), reading instruction (Allen-DeBoer et al., 2006), organizational skills training (Anderson, Munk, Young, Conley, & Caldarella, 2008), peer praise notes (Nelson, Caldarella, Young, & Webb, 2008), and expressive writing dialogue books (Regan et al., 2005) are among many of the effective interventions that address student concerns.

Those experiencing internalizing or externalizing symptoms are also positively influenced through family relationships, school connectedness, and academic achievement (Hall-Lande et al., 2007). Looking specifically at how school teams may intervene, improving connectedness through peer and teacher relationships and improving achievement through skill-based interventions are both helpful at improving outcomes. Social skills training positively

influences students with SEBC as it facilitates positive social interaction and may help them feel more connected to their school (Cook et al., 2008). Additionally, academic achievement increases when students are provided with mentoring services (James, 2008). Empirically supported interventions do have the potential to improve SEBC outcomes, but before any individual or group intervention plan may be established, a proper screening system will help ensure that the intervention matches the needs of the students.

Current EBD/SEBC Screening Measures

There currently are three screening measures designed for adolescent SEBC or EBD screening that may serve as initial gates of a screening system: the Strength and Difficulties Questionnaire (Goodman, 1997), the Student Risk Screening Scale (Drummond, 1994), and the Behavior Assessment System for Children-2, Behavioral and Emotional Screening System (BASC-2 BESS; Kamphaus & Reynolds, 2007). All three are screeners that provide a singular view of student risk and should not be considered diagnostic. The Student Risk Screening Scale and BASC-2 BESS provide information about internalizing and externalizing aspects of student behavior, but due to their lengthy format (25-30 questions each), it is not pragmatic for secondary school teachers to complete these screeners for all of their students. The Strengths and Difficulties Questionnaire is a short seven-question survey, but it only asks teachers to consider the externalizing concerns of their students, making it ineffective at screening for those at risk for internalizing concerns.

An empirically supported, multi-gated screening measure has been developed for the elementary school level, the Systematic Screening measure of Behavioral Disorders (SSBD, Walker & Severson, 1992), but this measure uses elementary age descriptors during the first gate, which is a teacher nomination and ranking process. Although research has provided some

support of this system with adolescent populations (Caldarella, Young, Richardson, Young, & Young, 2008; Richardson, Caldarella, Young, Young, & Young, 2009), it is possible that the initial gate descriptors are not adequate for students during their early adolescent transition period, a prime developmental and educational window of identification and intervention. The value of the second and third gates of this screening system is questionable when used with adolescent students because these gates were developed specifically for an elementary school population. Their developmental appropriateness for early adolescent students has not been empirically evaluated. Furthermore, teachers are asked to complete a Stage 2 form on students they identify as at risk in Stage 1, as well as complete in class and recess observations. With secondary teachers having approximately 150 students, the pragmatic use of a screener is important. A brief but thorough second gate is most desirable.

Purpose of the Study

As stated previously, EBD is a serious problem that affects children and youth if it is not identified and addressed in a timely manner. Through effective screening and identification of SEBC, those experiencing challenges may access needed services to improve educational outcomes prior to developing a more serious concern like EBD. A proactive way to help students with SEBCs is for schools to participate in regular screening. A necessary component for SEBC detection is the use of a validated process that identifies those needs and matching needs with responsive and preventative services. Thus, a necessary component in this identification process is using an efficient but effective screening process. However, there are few screeners that are specifically designed to identify the needs of students with externalizing or internalizing behaviors.

A spring 2011 study identified age appropriate descriptors of internalizing and externalizing behaviors for an early adolescent population through educator surveys. Using these descriptors, a teacher nomination form was developed, the Teacher Nomination Form (TNF), which can be used as an initial gate of a universal screener. This initial gate facilitates the consideration of all students in the school during this phase, creating a universal screening process. This study examined the concordance of the TNF (as a first gate) and the BASC-2 BESS (as a second gate) in order to gather information regarding the use of subjective and ipsative nominations and a normative screener in a single screening system.

The TNF is a source of subjective and ipsative data. Teacher nominations and rankings are subjective because they're based upon a teacher's personal notion of at-risk behaviors. Teachers 1 and 2 both may recognize crying and hitting as at-risk behaviors, but Teacher 1 and 2 may disagree about which behavior (crying or hitting) is more concerning. They will therefore nominate students differently in rank, category, or may not even nominate the same students. Additionally, teacher rankings are ipsative because rankings depend on one another (Baron, 1996; Meade, 2004). If Teacher 1 ranks Student A as the number one student for at-risk behavior, Students B, C, D, and E cannot also be the most at-risk according to that teacher. Furthermore, Student A's number one spot for at-risk behavior does not hold meaning outside of Students A-E. Student A is the most at-risk in that group, but Student A's at-risk status compared to students in their school or students in the nation is unknown. The TNF therefore provides information regarding a teacher's subjective notion of at-risk behavior as compared to others in their sample. Although the TNF's nomination and ranking process is valuable, the data do not hold meaning outside of an individual teacher's perception and the subset of students he or she ranks. The school therefore needs additional data to interpret a process like the TNF.

Normative data considers an individual's attribute as compared to a group or groups of other people (Chan, 2003). The term normative is used in this project in order to indicate the norm-referenced group provided by the BASC-2 BESS. By using normative data as second gate, it indicates that a student in a given school is at-risk as compared to a national sample, rather than this student is at risk as compared to his school peers. The degree of risk or dysfunction of the highly ranked students may vary depending on the teacher's experience, perceptions, tolerance, or the density of students with difficulties in that teacher's teaching load, making risk level based upon a normative sample highly valuable. If a given school has very few students with behavioral concerns, it seems unnecessary to provide interventions for students who are merely 'worse' than their school peers.

This study analyzed the alignment of the TNF (subjective and ipsative) and BASC-2 BESS (normative). Given that two different types of data were used (subjective/ipsative and normative) in this study, it seemed necessary to examine the alignment of the two gates. Also, this analysis examined social validity by asking teachers who participated to complete a short social validity questionnaire, enabling the study of the pragmatic value of this screening system from the perspective of educators.

By testing this newly developed measure that identifies those at-risk during early adolescence, preventative strategies can be implemented to help these youth learn and use adaptive, healthy coping strategies. Many students suffering from, or at-risk for, emotional and behavioral problems attend schools that have few resources of early identification and responsive services (Lane & Carter, 2006). Rather than facilitating schools as a system in which students do not have their needs and concerns addressed in a timely manner, screening, as part of a multi-tiered model, provides identification of individual needs. Students need access to timely and

responsive resources in order to move them out of the at-risk category. Schools may have programs already implemented to help students with SEBC, but the ability of school personnel to systematically identify those students in a timely, efficient manner is limited. This research will help to address that challenge for an early adolescent population.

Method

Preliminary Research

Using the Systematic Screening for Behavior Disorders (SSBD; Walker & Severson, 1992) as a model for a respected screening system (Lane et al., 2009), research was conducted by Ellie L's research team establishing a developmentally appropriate list of behavioral descriptors of early adolescent populations to be used with a teacher nomination screening process. Because the SSBD was developed for students in elementary schools, the behavioral descriptors used in the teacher nomination or first gate of the universal screening process may not reflect the developmental, emotional, and behavioral contexts of the early adolescent population. The first gate of the SSBD asks teachers to (a) identify 10 students who exhibit internalizing behaviors and 10 students who exhibit externalizing behaviors, and (b) rank the top three students in each externalizing/internalizing category. The examples of internalizing or externalizing behaviors provided in the current SSBD may not be characteristic of an early adolescent population, thus not effectively screening for SEBC. Preliminary research (Schilling, 2009) was completed to develop a list of behavioral descriptors for a teacher nomination form (TNF).

The development of an age-appropriate nomination form was conducted by considering the results of Schilling's (2009) focus group research on early adolescent EBD. Junior high school and middle school teachers were interviewed regarding their perceptions of youth they believed were at risk for developing behavioral difficulties. This exploratory study resulted in a preliminary list of behaviors that could be included in a screening measure, which were used in the development of the Teacher Nomination Form (TNF). Additionally, an exhaustive list of age-appropriate descriptors of middle and junior high school internalizing behavior and externalizing behavior was developed by reviewing the research literature. A list of potential

terms was developed that described school-based behaviors of students, intending to capture both internalizing and externalizing characteristics and based on the SEBC literature

After the list was developed, Ellie L's research team employed the help of 97 teachers from three middle schools or junior high schools in a mountain west state in the US. Each teacher read examples and non-examples of internalizing and externalizing behaviors. For both internalizing and externalizing behavioral categories teachers marked the seven descriptive terms they thought best described at-risk student behaviors. Participants were also asked to identify non-examples of externalizing and internalizing behaviors. The research team identified the descriptors teachers indicated were the most prominent behavioral descriptors of adolescent SEBC. Using a cutoff score of $n \geq 40$ for external and $n \geq 40$ for internal (chosen based on descriptive statistics), the research team developed lists of six key descriptors for each identifying category. Using a cutoff score of $n \geq 56$ for non-examples of externalizing concerns and $n \geq 50$ for non-examples of internalizing concerns, the research team developed lists of four non-examples for both the internalizing and externalizing categories. The most prevalently chosen descriptors were incorporated into a new teacher nomination, henceforth called the Teacher Nomination Form (TNF). The TNF is considered an initial gate of a universal screener (see Appendix A).

In the winter of 2012, research was conducted regarding the test-retest reliability of the TNF. Approximately 47 teachers in one school in a mountain west state completed the TNF by considering their entire class roster (approximately 150 students) and nominating and ranking five students they were most concerned about for internalizing concerns and five students they were most concerned about for externalizing concerns. This occurred on two occasions approximately three weeks apart. The data was based upon teacher rankings and was examined

using a chi-square goodness of fit test. The reliability was based upon percentages of teachers who consistently nominated and ranked the same students at time 1 and time 2, rather than correlation scores. The results of this study indicated that teachers were moderately consistent in re-nominating and ranking students in the externalizing category (61%) and somewhat consistent in re-nominating and ranking students in the internalizing category (47%). The researchers found that 86% of teachers nominated three or more of the same externalizing students that they had previously nominated, but only 58% of teachers nominated three or more of the same internalizing students. Research regarding internalizing disorders suggests that they are more difficult to detect (Lane, Kalberg, Lambert, Crnabori, & Bruhn, 2010; Reynolds, 1990) which would explain the lower reliability.

Data Collection

Data for the current study were collected from two schools in a Mountain West state. Participants included 59 middle school teachers (76% female). School 1 had a total of 45 full time teachers and of those, 22 teachers participated (49%). School 2 had a total of 59 full time teachers and of those, 37 teachers participated (63%). Each person who participated received a \$75 Visa gift card. Of those 59 teachers, 88% identified themselves as European American and 11% identified themselves as a part of another ethnic group (with no more than 2 teachers in any other category).

Students were considered in this research study, but they did not directly provide information regarding their at-risk status. School One had 906 students (93% European American, 3% Asian American, 2% African American, 4% American Indian, 1% Pacific Islander, 9% Hispanic). School Two had 1417 students (94% Caucasian, 3% Asian, 1% African,

4% American Indian, 2% Pacific Islander, 7% Hispanic). School One had 428 females (47%) and 478 males (53%). School Two had 703 females (50%) and 714 males (50%).

The information collected from the teachers provided identifying information such as the student initials, gender, ethnicity, and grade of each nominated student. There were 355 distinct students identified in this study and 122 of those students had multiple nominations. For purposes of this study the data considered each teacher nomination (each case) as a separate student. With that, there were a total of 518 student nominations considered in this study. At School One there were 133 males nominated (66.8%) and 66 females nominated (33.2%). At School Two there were 221 males nominated (69.5%) and 97 females nominated (30.5%). The student nominated were primarily Caucasian at School One (n= 159, 79.9%) and primarily Caucasian at School Two (n=258, 81.1%). There was a fairly even distribution of grades of the students with 66 seventh grade students (33.2%), 63 eighth grade students (31.7%), and 70 ninth grade students (35.2%) nominated at School One and 124 seventh grade students (39.0%), 84 eighth grade students (26.4%), and 110 ninth grade students (34.6%) nominated at School Two.

Measures

Teacher Nomination Form (TNF). The TNF was the primary measure examined in this study. It was developed in the spring of 2011 and was described in the preliminary research section. The TNF required teachers to read behavioral descriptors of internalizing students and externalizing students and then nominate students five they considered to be at-risk in each category. After nominating students in each category, teachers were asked to rank the students on the same nomination form. A student ranked number one was the student about whom the teacher is most concerned. This ranking occurred within each category and is called either internalizing ranking or externalizing ranking. After the teachers ranked the students in the

internalizing and externalizing categories, the teachers were asked to combine their five internalizing students and five externalizing students into the same list. Teachers then ranked those ten students between the two categories. This ranking between the categories is called combined category. The combined category provides information regarding the overall concern regardless of the categories.

Behavior Assessment System for Children, Behavioral and Emotional Screening System (BASC-2 BESS). The second measure used was the BASC-2-BESS screener, which has a specific child/adolescent form to be completed by a teacher. The BASC-2 BESS is appropriate for a second-gate screening procedure as it takes approximately 5-10 minutes to complete for each student, making it feasible for teachers to complete this instrument for multiple students (Kamphaus & Reynolds, 2007). Available literature does not provide evidence that the BASC-2 BESS has been used as a second-gate screening instrument in a secondary school setting, although it has the psychometric properties to be considered a reasonable instrument in screening for SEBC due to its validity indexes, test validity, and reliability (Glover & Albers, 2007).

Validity indexes on the BASC-2 BESS provides information about test-taker accuracy. For purposes of this research, the F index was evaluated, which indicates if the person taking the test is overly negative. If a teacher is filling out this form for a student and consistently rates the child as “almost always” in referring to negative things, the F index will be elevated. An elevated F indicates that caution should be taken when interpreting this test (Kamphaus & Reynolds, 2007).

The BASC-2 BESS has been shown to have evidence of validity (accurate screening for SEBC) and reliability scores (consistency of measurement across conditions). In terms of validity, the BASC-2 BESS has high sensitivity (.80), high specificity (.95), moderate positive

predictive power (.76), and high negative predictive power (.96) (Kamphaus & Reynolds, 2007). Additionally the BASC-2 BESS is highly correlated with the total behavioral score from the original BASC-2 (.90) as well as the Achenbach System of Empirically Based Assessment: Teacher Report Form total and externalizing scores: total problems (.76) and externalizing (.69). The BASC-2 BESS is weakly correlated with the Achenbach internalizing score (.29) (Achenbach & Rescorla, 2001). The BASC-2 BESS Teacher, Child/Adolescent Form measurement has high reliability in internal consistency (.96-.97), test-retest reliability (.91), and interrater reliability (.71) (Kamphaus & Reynolds, 2007).

Social validity form. Teachers were asked to fill out the Screening System Social Validity Form (SSSVF) a 7-item social validity survey developed for this research project. The SSSVF uses a 7-point Likert scale from 1 (strongly disagree) to 7 (strongly agree) indicating the level of teacher agreement with a given question. The social validity scale was developed based upon research by Wolfe (1978). Three areas of social validity were emphasized by Wolfe: goals, procedures, and effects. First, a questionnaire must ask if the intended goal of the screening system is desirable. In this case it should be asked if identifying students at risk for SEBC is desirable. Second, it should be asked if the procedures or the process of collecting the needed information is effective. Finally the success of the outcome should be considered; meaning that those identified are actually at-risk for SEBC and would benefit from further help. With these three goals in mind, seven questions were developed for the SEB-SSSVF: two referring to goals, three referring to procedure, and two referring to effect (see Appendix B).

Procedures

Data collection occurred during the 2011-12 school year. Permission was received from the Brigham Young University Institutional Review Board and the school district's research

review board. Teachers were asked to participate in screening for students at-risk for SEBC during a faculty meeting. Interested teachers were given a packet containing the screening materials and a standardized explanation of the screening process. The entire process including the nomination process, BASC-2 BESS forms, and the SSSVF took less than one hour. Teachers were given two weeks to complete their screening packet and returned their results to a locked box at their school.

Teachers filled out a general demographic form asking their gender, ethnicity, number of years teaching, and subjects taught. After completing demographic information teachers completed the TNF (nominating and ranking of ten students). Following the TNF, teachers completed the BASC-2 BESS on their five ranked internalizing students and five ranked externalizing students. Although teachers were asked to nominate 10 students, two teachers nominated less than 10 (one nominated 9 and one nominated 7). Additionally, all invalid (overly negative) BASC-2 BESS forms were removed and two teachers were removed from the study because their data were uninterpretable (one did not do any BASC-2 BESS forms, the other did the BASC-2 BESS on different students than they nominated). This resulted in 518 interpretable BASC-2 BESS forms.

After completing both screening gates, teachers were asked to fill out the Screening System Social Validity Form (SSSVF). An additional comment space was provided for any overall thoughts of the screening process. The feedback from the teachers, as represented by the SSSVF, helped the researchers evaluate whether this process has evidence of being socially valid.

In order to ensure safety to those students who were identified as at-risk by the BASC-2 BESS, the research team provided the BASC-2 BESS information to the schools where the data

was collected. After the BASC-2 BESS forms were scored, an individualized sheet was made for each teacher with the identifying information, BASC-2 BESS T-score, and BASC-2 BESS category of risk (elevated or extremely elevated) for each student they nominated. The score sheets were placed in a sealed envelope with each teacher's initials and subject taught. Those envelopes were given to the principal of the respective school who was able to provide the envelopes to individual teachers and decide how to proceed.

Data Analysis

Analyses were conducted using the IBM Statistical Package for the Social Sciences Statistics (IBM SPSS Statistics, 2010) to evaluate the data of this research study. The four main elements of data used in this research project were teacher ranking of a given student, number of teacher nominations of a given student, BASC-2 BESS T-scores of a given student, and teacher scores on the SSSVF.

Rankings. The rankings provided by teachers were reverse coded so that a higher number means higher teacher concern. Rankings were provided in the internalizing, externalizing and combined category. There were 260 internalizing nominations, 258 externalizing nominations, and 479 combined nominations.

Number of teacher nominations. Some students were nominated by more than one teacher. In the data analyses two variables were used: Multiple Nominations (1 nomination or more than 1 nomination) and Number of Nominations (1, 2, 3, 4, or 6 nominations, no one was nominated 5 times).

BASC-2 BESS. Raw scores of the BASC-2 BESS were converted into T-scores as indicated in the administration manual. The BASC-2 BESS T-scores were used in all analyses to represent the normative level of concern.

Social Validity Form. The scores from the SSSVF were interpreted using descriptive statistics in order to gather the mean, median, and mode for each of the seven questions.

Research Questions

The foremost question of this research project was whether strength of teacher concern (TNF) predicts the level of BASC-2 BESS T-scores. This question was examined by looking at how the ranking of a given student (in internal, external, and combined categories), number of nominations of a given student, and the interaction of combined ranking and number of nominations, work together to predict BASC-2 BESS T-scores. Also, this study examined the ability of this screening system to serve as a pragmatic and plausible system for schools to implement. In order to explore these ideas there are six main research questions this study undertook. Below are the questions along with the statistical analysis:

How does the ranking on the TNF in the internalizing category predict the level of BASC-2 BESS T-score?

A two-tailed Spearman's Rho test was run to determine if there was a relationship between internal ranking and level of BASC-2 BESS T-score. This analysis provided information regarding the concordance of strength of teacher concern in the internal category and BASC-2 BESS T-scores. It was hypothesized that there would be a relationship between internalizing rank and BASC-2 BESS scores, which would indicate concordance between gates 1 and 2.

How does the ranking on the TNF in the externalizing category predict the level of BASC-2 BESS T-score?

A two-tailed Spearman's Rho was completed to determine if there was a relationship between external ranking and level of BASC-2 BESS T-score. This

analysis provided information regarding the concordance of strength of teacher concern in the external category and BASC-2 BESS T-scores. It was hypothesized that there would be a relationship between externalizing rank and BASC-2 BESS scores, which would indicate concordance between gates 1 and 2.

How does the ranking on the TNF in the combined category predict the level of BASC-2 BESS T-score?

A two-tailed Spearman's Rho test was completed to determine if there was a relationship between combined category and level of BASC-2 BESS T-score. This analysis provided information regarding the concordance of strength of teacher concern (between the internal and external categories) and BASC-2 BESS T-scores. It was hypothesized that there would be a relationship between combined rank and BASC-2 BESS scores. This would indicate that the TNF (subjective and ipsative ranking system) is concordant with the BASC-2 BESS (an ordinal screener).

Is there a significant difference in BASC-2 BESS T-scores between those nominated by 1 teacher and those nominated by 2 or more teachers? Is there a significant difference in BASC-2 BESS T-scores between those nominated by 1, 2, 3, 4, and 6 teachers?

Two analyses were run to analyze the way in which number of nominations function in terms of BASC-2 BESS T-scores. The first analysis looked for a significant difference between singularly or multiply nominated students (Independent T-test). The second analysis looked for a significant difference

between those students who are nominated by 1, 2, 3, 4, 5, or 6 teachers (One-way ANOVA).

It was hypothesized that there is a significant difference between BASC-2 BESS scores of those nominated by 1 teacher and those nominated by 2 or more. This would mean that multiple teachers considering a student as at-risk indicate a higher risk level.

How does combination of (1) number of teachers that nominated a student and (2) the rankings of teachers predict the level of BASC-2 BESS T-score?

This analysis considered how ranking (in the categories of internalizing rank, externalizing rank, and combined category) and number of nominations predict a student's BASC-2 BESS T-score. Three Multiple Linear Regressions were used in order to predict a student's level of BASC-2 BESS score based upon their number of nominations and level of ranking. A regression was done in each of the following ranked categories: internalizing, externalizing, and combined. It was hypothesized that by combining these two variables (rank and number of nominations), a significant regression equation would be developed indicting level of risk by screening variables.

What pragmatic value does this process have according to teachers?

Descriptive data from the SSSVF was reviewed and reported in order to determine the consensus of the school population. Intense statistical analyses were not run be on the data; rather, descriptive statistics regarding mean, median, and mode score on each of the seven questions were determined.

Additionally, the comments provided by teachers were analyzed using a grounded theory approach (Strauss & Corbin, 1990). A full grounded theory approach was not used given that the comments were not lengthy, but the approach of memoing, classifying, categorizing, defining, and placing in the dimensions/themes was used. The researchers found the common themes and reported them.

Results

Preliminary Statistical Analyses of Screening Measures

As previously mentioned, the BASC-2 BESS flags infrequently endorsed questions in order to consider the validity of test-taker responses. This research considered the F score, which considers infrequently endorsed questions. Teachers who strongly endorsed three infrequent questions were considered to have questionable validity profile and those who endorse four or more are considered to have a very questionable profile (Kamphaus & Reynolds, 2000). For purposes of this study, cases (not teachers) that had a questionable or very questionable validity profile were excluded from the analyses (8.4%, n=48). A total 518 (91.6%) cases were included.

Effect of internalizing TNF ranking on prediction of BASC-2 BESS T-score

A Spearman *rho* correlation coefficient was calculated for the relationship between internalizing rank and BASC-2 BESS T-score. A significant correlation was found ($rho(260) = .177, p=.004$), given the level of the correlation (.177) it may be stated that a weak positive correlation exists between the two variables. Higher internalizing rankings on the TNF tended to receive higher BASC-2 BESS scores. The results are noted in Table 3.

Effect of externalizing TNF ranking on prediction of BASC-2 BESS T-score

A Spearman *rho* correlation coefficient was calculated for the relationship between externalizing rank on the TNF and BASC-2 BESS T-score. A significant correlation was found ($rho(258) = .246, p < .001$), given the level of correlation (.246) it may be stated that a weak, positive relationship exists between the two variables. Higher externalizing rankings tended to receive higher BASC-2 BESS scores as indicated in Table 3.

Effect of combined TNF ranking on prediction of BASC-2 BESS T-score

A Spearman *rho* correlation coefficient was calculated for the relationship between combined category and BASC-2 BESS T-score. A positive correlation was found ($rho(479) = .304, p < .001$) in the lower end of the moderate range, indicating a significant relationship between the two variables. Higher combined rankings tended to receive higher BASC-2 BESS scores as indicated in Table 3.

Effect of number of teacher nominations on prediction of BASC-2 BESS T-score

The result from an independent-samples *t* test was calculated comparing the mean BESS score of students nominated once or more than once. No significant differences were found ($t(516) = -1.483, p > .05$) for this analysis. The mean of the singularly nominated students ($m=64.294, sd=9.7114$) was not significantly different from the mean of students identified by more than one teacher ($m=65.485, sd=8.55$).

A one-way ANOVA was computed comparing the BASC-2 BESS scores of students who were nominated by 1, 2, 3, 4, 5, or 6 teachers. A significant difference was found among the number of nominations ($F(4, 510) = 3.048, p < .05$). Tukey's HSD was used to determine the nature of the differences between the number of nominations and BASC-2 BESS scores (Table 4). This analysis revealed that students who were nominated by 6 teachers received a higher BASC-2 BESS score ($m=70.31$) than students who were nominated by 1 teacher ($m=64.11$). Students who were nominated by 2, 3, or 4 teachers (no students were nominated by 5) were not significantly different than those nominated by 1 or 6 teachers. Although there was a significant difference between 70.31 and 64.11, both BASC-2 BESS scores were in the elevated risk category. Because both scores fell into the same category, the practical significance of this difference is nominal.

Effect of multiple nominations and level of ranking on prediction of BASC-2 BESS T-score

Three multiple linear regressions were calculated to predict a student's level of BASC-2 BESS score based upon their number of nominations and level of ranking. Three regressions were undertaken in order to examine level of ranking in the individual categories of internalizing, externalizing, and combined (combined list of internalizing and externalizing students). Given the redundancy of the three types of rankings (if John was nominated in externalizing, he was also nominated in combined category) it seemed important to consider these questions separately. The first variable being considered was Number of Nominations, which is coded as 1=1 nomination, 2=2nominations, 3=3 nominations, 4= 4nominations and 6= 6 nomination. The second and third variables were Internal Rank and External Rank which were coded as 5=most at risk and 1=least at risk. The final variable considered was Combined Rank which was coded with 10= most at risk and 1= least at risk.

A significant regression equation ($F(2, 256) = 6.71, p < .01$) was calculated predicting BASC-2 BESS scores based upon Internal Rank and Number of Nominations with an R^2 of .050. Students' predicted BASC-2 BESS score was equal to $58.461 + .924$ (Number of Nominations) + 1.05 (Internal Rank). Internal Rank was a significant predictor, but Number of Nominations was not a significant predictor of BASC-2 BESS scores in the presence of Internal Rank.

A significant regression equation ($F(2, 253) = 10.82, p < .001$) was calculated predicting BASC-2 BESS scores based upon External Rank and Number of Nominations with an R^2 of .079. Students' predicted BASC-2 BESS score was equal to $60.52 + .595$ (Number of Nominations) + 1.551 (External Rank). External Rank was a significant predictor, but Number of Nominations was not a significant predictor of BASC-2 BESS scores in the presence of External Rank.

A significant regression equation ($F(2, 473) = 28.539, p < .001$) was calculated predicting BASC-2 BESS scores based upon Combined Rank and Number of Nominations, with an R^2 of .108. Students' predicted BASC-2 BESS score was equal to $58.832 + .460(\text{Number of Nominations}) + .975(\text{Combined Rank})$. Combined Rank was a significant predictor, but the Number of Nominations was not a significant predictor of BASC-2 BESS scores in the presence of Combined Rank.

Teacher's report of pragmatic value of the screening process

The Screening System Social Validity Form asked teachers to answer questions regarding the adequacy of the TNF and BASC-2 BESS as a screening system. Teachers rated the accuracy of seven statements about this system using a seven-point likert scale with 1 being strongly disagree and 7 being strongly agree. On average, teachers responded to all seven questions with a Neutral (4/7) or Somewhat Agreed (5/7) response (see Table 5). This indicated that, on average, teachers were either indifferent or somewhat positive when considering the feasibility and value of this screening system.

Question one asked whether this screening system met the needs of screening for students at-risk for SEBC. On average, teachers were neutral to somewhat agree with question one (mean= 4.93, mode=5). Question two asked whether screening for students at-risk for SEBC through the TNF was feasible at their school. On average, teachers somewhat agreed with question two (mean= 5.32, mode= 5). Question three asked whether this screening system was more effective at screening for SEBC than their school's current system. On average, teachers were neutral regarding question three (mean =4.42, mode=4). Question four asked whether this system was conducted in a timely manner. On average, teachers somewhat agreed to agreed with question four (mean=5.81, mode=6). Question five asked whether other teachers would find this

system effective. On average, teachers somewhat agreed to agreed with question five (mean=5.11, mode=6). Question six asked whether this system was appropriate for middle school students. On average, teachers somewhat agreed with question six (mean=5.53, mode=5). Finally, question seven asked whether this screening system can adequately identify students who are at-risk. On average, teachers somewhat agreed with question seven (mean=5.04, mode=5).

Free-response Teacher Feedback

Twenty-four teachers (40.6%) provided additional feedback in the “additional comments” box. The additional comments were analyzed using a grounded theory approach (Strauss & Corbin, 1990) by coding and categorizing the responses into common themes. Teacher comments did not reach a meaningful consensus given the free response nature of the comment box. There were four key themes that encompassed teacher's responses with n=10, n=5, n=6, and n=3 teachers responding in each category. The separation of themes into subthemes included smaller numbers of participants (n=2 to 3). Despite the small number of responses, it seemed necessary to divide the responses into sub-themes to provide greater clarity of teacher comments.

Theme 1: BASC-2 BESS adequacy. Theme 1 encompassed several respondents’ (n=10) comments looking at how the items in the BASC-2 BESS may not fully capture the picture of at-risk behaviors. It was suggested that the BASC-2 BESS does not consider all of the areas of risk and that the measure may need additional questions added to address teachers’ sense of a comprehensive measure.

Three teachers specifically commented that they felt the BASC-2 BESS may not adequately consider internalizing students. One teacher commented, “I feel that the questions are stronger for the external processor [sic] than for the internal process student.” Another teacher

explained that because internalizing students are quieter, she wasn't able to attest to the student's engagement in internalizing behaviors such as crying or being upset much and in her case that "would make my #2 appear more severe than my #1 (even though [my number 1] seems much more at risk)." Another teacher commented that, "there [were] not enough "internalizing behaviors" questions or options."

Similar to internalizing concerns, two teachers commented on the lack of social skills questions on the BASC-2 BESS. One teacher suggested that questions such as "does the students spend most of their time alone, does the student have trouble 'positively interacting', and 'the student has a group of friends they relate with'" be added to the BASC-2 BESS. Another teacher suggested that the question of "appears not to have friends" and "does not socialize with other students inside or outside of classroom" be added.

Due to this concern, an independent samples-*t* test was calculated comparing the mean BESS score of students nominated in the internalizing or externalizing category. A statistically significant difference was found ($t(516) = -4.056, p < .01$). The mean of the internalizing students ($m=63.378, sd=9.435$) was significantly lower than the mean of externalizing students ($m=66.574, sd=8.452$). This suggested that those students nominated by teachers in the internalizing category were significantly more likely to receive a lower BASC-2 BESS score than those in the externalizing category. Despite the significant difference, the mean scores (63.4 and 66.6) are only three points away from each other and both fall in the "at-risk" range of the BASC-2 BESS. This suggests that although statistical significance was found, the practical significance is limited.

Theme 2: Use of school data. Several teachers ($n=6$) commented that school data (e.g., absences, office discipline referrals) could be useful in noticing less visible at-risk behaviors.

One teacher suggested that students may not complain about health, but they may be absent from school “which may either be a cause of the behavior or a result of their issues.” Another teacher further commented that, “attendance is a red flag that would help this survey be even more effective.” Finally another teacher suggested the consideration of “other at-risk factors such as attendance, grades, office referrals, and benchmarks academic testing” in order to identify at-risk students.

Theme 3: Insufficiency of identification. Theme 3 encompassed several respondents’ (n=6) comments looking at how a screening systems needs to do more than identify students who are at-risk. The comments fell into two areas: the need for screening to help classify the type of student risk and the need for screening to lead to intervention.

Theme 3.1: Classification. Several teachers suggested that a screening system needs to help identify students as at-risk, but that teachers should be describing the causes of the risk and category of the risk. It was suggested, “In order for this to be effective for developing an RTI plan, teachers need to identify possible cause’s [sic] not just signs and symptoms.” Another teacher commented, “I think this narrows things down, but the real reason behind the behavior isn't identified. All that is concluded is that the student is a concern.”

Theme 3.2: Intervention. Teachers also indicated that this system was not sufficient in its current form because it doesn't lead to intervention. One teacher suggested that students are at risk due to a “lack of supportive system at home, at school, at the city” and that it is important to help promote programs to help students. Additionally one teacher indicated that “a lot depends on what happens NEXT-just identifying is a small part of the solution.”

Theme 4: Difficulty answering the SSSVF. Three teachers reported difficulty answering the questions of the SSSVF. Two teachers reported this difficulty, as they did not

know their school's current screening system. One teacher reported difficulty, as he or she did not know how this screening system would be applied in their school.

Summary

Results from this study indicated that there was a relationship between the teacher rankings on the TNF and the BASC-2 BESS. A weak positive relationship was found in the internalizing and externalizing category and a moderate positive relationship was found in the combined category. Additionally the results indicated that receiving one or more than one nomination did not predict BASC-2 BESS scores except in the rare case where six teachers nominate a student. Finally, three multiple linear regressions were calculated to predict a student's level of BASC-2 BESS score based upon their number of nominations and level of ranking. In all three regressions the level of ranking was significantly related to BASC-2 BESS score, but number of nominations was not.

Results from the Social Validity Form indicated that on average teachers somewhat agreed that this system would adequately screen for SEBC. Teacher comments provided four key themes regarding this screening system in the areas of: BASC-2 BESS Adequacy, the use of school data, the need to classify/intervene, and general difficulty answering the SSSVF.

Discussion

This study examined the relationship between a teacher nomination process and a normative measure of students at risk for social, emotional, and behavioral concerns. Several important issues that may be valuable when considering a screening system involving teacher nominations were identified. The three key areas to be discussed are number of nominations, ranking of teacher nomination, and social validity.

Reflections on Findings

Number of teacher nominations. One of the most valuable findings in this research study was that multiple teacher nominations of a single student were not related to BASC-2 BESS scores. This was true except in the rare condition of 6-nominations as compared to 1-nomination (only 3 out of 355 students were in this condition). Although there was a statistically significant difference between those two groups—those nominated by 6 teachers received a mean BASC-2 BESS score of 70.31 and those nominated by 1 teacher received a mean BASC-2 BESS score of 64.11—the discrepancy between the means may not be considered practically significant because both scores fall in the elevated or extremely elevated categories of the BASC-2 BESS, and the students are considered to have a similar level of at-risk behaviors. This means that even if 3 teachers nominated a single student, the student was not significantly more likely to be categorized as at risk than if one teacher nominated that student.

The recognition that multiple teacher nominations were not indicative of greater at-risk status suggests that schools need to consider subjective teacher nominations as indicative of risk in and of itself. The combinations of multiple teacher nominations may have been statistically insignificant because teachers are noticing and experiencing student behaviors from an individual perspective rather than from a clear standard, thus leading them to complete the

BASC-2 BESS differently. Additionally, teachers may construct their idea of at-risk behaviors (and determine the most at-risk) relative to the students they have or have had in their classes. School teams that complete a screening process are encouraged to consider students broadly and include all teacher perspectives in order to cast a wide net in identifying potentially at-risk students.

A universal nomination process where teachers broadly consider all of their students has distinct advantages over traditional individual teacher referral processes. Significantly fewer students are identified as at-risk for SEBCs when using traditional teacher referral process (name the students you think have concerns) as opposed to a universal screening process that asks teachers to consider all of the students who have specifically identified concerns (Eklund et al., 2009). Teacher referral is often used to help students receive special education services, and there is often a delay between a teacher noticing a problem and actually referring a student for services (Duncan, Forness, & Hartsough, 1995). By involving teachers in universal screening, they can identify many students who need various levels of services rather than just identifying those students who have already experienced failure and need intensive services. A universal screening system allows teachers to broadly consider all of their students based upon their subjective notion of risk that is relative to the students they have in their classes. By using multiple teacher perspectives it allows students to be identified even if their problems are not evident in every class or are not considered to be at-risk by certain teachers. After a group of students are identified, teachers can then complete a normative measure like the BASC-2 BESS for those students they consider to be at-risk. The use of a normative measure can help teachers substantiate their subjective and ipsative notion of risk, providing generalizable data of risk

status. This process would allow for faster and more meaningful data to be obtained as compared to a traditional referral process.

Ranking of teacher nominations. In all three categories (internalizing ranking, externalizing ranking, and combined category ranking) a statistically significant correlation was found between TNF ranking and BASC-2 BESS scores. The statistical significance indicates there is a relationship and the correlation coefficient (r) indicates the strength of the relationship with 0 indicating no relationship and the strength of the relationship increasing as coefficients approach -1.0 or 1.0. For students nominated in the internalizing category, there was a weak, but statistically significant, correlation ($r = .177$) between BASC-2 BESS scores and the intensity of the teachers' rankings. Similarly, for students nominated in the externalizing category, there was a weak, but statistically significant, correlation ($r = .246$) between BASC-2 BESS scores and the intensity of teachers' rankings. Finally in the combined category a moderate (lower end of the range) and statistically significant correlation ($r = .304$) was found between BASC-2 BESS scores and the intensity of teachers' combined rankings. These results indicate a relationship (albeit weak to moderate) between teacher ranking of at-risk behaviors and normative risk status according to the BASC-2 BESS. Due to this statistically significant relationship and the fact that 74% ($n = 381$) of all nominated students were at-risk according to the BASC-2 BESS, it seems that teachers were capable of identifying and ranking at risk students (Sprague et al., 2001; Youngstrom, Loeber, & Stouthamer-Loeber, 2000).

Although there was a statistically significant relationship between teacher rankings and the BASC-2 BESS scores, the level of correlations were weak in both of the internalizing and externalizing categories. The weak correlations may have been influenced by the design of the TNF, which only allowed 5 student nominations in each of the internalizing and externalizing

categories. In comparison, the combination category allowed for 10 nominations and obtained a slightly higher correlation in the lower end of the moderate range. Smaller ranges make it more difficult to obtain a strong correlation because slight deviations become more influential.

Additionally, the majority of students nominated by teachers (n=381, 74%) were in the elevated or extremely elevated risk category according to the BASC-2 BESS. It is likely that teachers had difficulty distinguishing the minute differences between several students who were all clearly at-risk and then ranking them accordingly. Increasing the range in the sample by having teachers nominated more than five students would allow a greater amount of gradation between the behaviors of nominated students, thus allowing greater distinguishing between rankings and BASC-2 BESS scores.

This concept was further evaluated by examining the TNF Type 1 error for the internalizing, externalizing, and combined ranking (see Tables 6-8). These tables were developed by calculating the percentage of students nominated on the TNF who were actually at-risk according to the BASC-2 BESS (receiving a T-score of 61 or higher). In the internalizing category there was a downward movement of the percentages, but not clear distinguishing between the individual ranking categories. In the externalizing category there was a clear downward movement of the percentages with a higher rank being associated with a greater likelihood of being at-risk on the BASC-2 BESS. In the combined category there was a clear downward movement for the top five ranked students, but variability in the Type 1 error for the bottom five rankings. This indicates that there was a relationship between level of ranking in all three categories and risk level on the BASC-2 BESS. Future research may want to consider evaluating teacher nominations and rankings with a greater range of nominations in order to gain further information or by considering combined ranking alone.

Social validity. The social validity instrument indicated that on average teachers were neutral or tended to endorse the “somewhat agreed” response with all of the questions regarding the adequacy of this screening system for middle school populations. The qualitative analysis provided further depth into the teachers perspectives and indicated three main areas of focus: BASC-2 BESS inadequacy, the use of school data, and need for more than identification, i.e., using screening to lead directly to intervention.

Several teachers reported concerns with the adequacy of the BASC-2 BESS, specifically the lack of questions regarding home life, internalizing concerns, and socialization. These teachers' comments emphasized the need to evaluate even well respected measures and to consider additional information that a standardized measure may not capture (Glover & Albers, 2007). Additionally, a significant difference was found in BASC-2 BESS scores between internalizing and externalizing students, with internalizing students receiving a significantly lower BASC-2 BESS scores. This supports teacher concerns that the BASC-2 BESS may not capture the needs or problems of internalizing students. Although there is merit to this concern, identification of internalizing concerns is difficult for a measure to capture (Lane et al., 2007; Reynolds, 1990; Severson, Walker, Hope-Doolittle, Kratochwill, & Gresham, 2007). The BASC-2 BESS is a screener and is intended to provide a brief indication of student risk status. The brevity of the measure helps make it more feasible to complete in a school environment and addition additional questions would limit the pragmatic value of the BASC-2 BESS.

Several teachers also commented on the need for school data to aid in identifying at-risk students and teachers may need training in screening in order to help increase their confidence in a screening process (Severson et. al, 2007). Teacher nomination cannot be considered the only source of information for identification. Teachers reported the need to use school data to help

identify students. Student absences, office discipline referrals, completion of assignments, and grades have been found to be helpful in identifying at-risk students (Sprague et al., 2001; Tobin & Sugai, 1999).

The final area regarding the social validity comments was several teachers concern that identification is not enough. Teachers reported the need to elaborate on student concerns, the need to classify risk categories, and the need for screening to lead to intervention. These comments indicate teachers support of the idea of identifying and intervening based upon the type and severity of a student's concern (OSEP Centre on Positive Behavioral Interventions and Supports, 2000). Screening should be designed to easily and accurately lead to effective intervention that matches students' needs (Glover & Albers, 2007) and it only can do so if concerns about students are clearly defined.

Limitations

One limitation of this study was the low test-retest reliability of teacher nominations on the TNF in the internalizing category. Prior unpublished research found that only 47% of teachers were consistent in nominating the same students as they had previously in the internalizing category of the TNF, with only 58% of teachers nominating three or more of the same internalizing students. This low test-retest reliability may be related to the covert nature of internalizing concerns (Lane et al., 2007; Reynolds, 1990, Severson et al., 2007).

A second limitation of this study was the small and homogenous sample of participants. The two schools where data was collected had largely Caucasian teacher and student populations. Additionally the sample size was small, with only 59 teachers participating. Participation in this study was voluntary with 49% of School One participating and 63% of School Two participating, making the sample an opportunity sample, based upon the teachers

who were willing to volunteer. It would be important to gather similar data with higher rates of participation and a more diverse teacher populations in different locations

Implications for Future Research

Future studies could examine how other factors and school data influence TNF ranking and BASC-2 BESS scores. Some of the factors that may be important to study would be student gender, student ethnicity, length of time a teacher has known a student, and comorbid (internal/external) nomination (Caldarella et al., 2008; Richardson et al., 2009) . Future studies should also consider student report in order to evaluate the accuracy of nomination and the general use of student report in identification. These factors may provide additional information regarding student risk status, as indicated by the TNF ranking and BASC-2 BESS. Additionally, data regarding absences, grades, standardized test scores, and office discipline referrals may be important to consider as those are easily accessible to a school. If these variables are related to the TNF ranking and BASC-2 BESS scores, they may provide an easier way to identify students who may be at risk or provide valuable information that could help indicate other areas of risk.

The TNF was developed for the early adolescent stage and future research should consider the use of a TNF screening system at the high school level. Research regarding developmentally appropriate descriptors, test-retest reliability, and Gate 1 and Gate 2 concordance should be replicated. This research would help examine what type of screening system would be feasible and developmentally appropriate for the high school level.

Another valuable consideration for research would be an exploratory factor analysis regarding the BASC-2 BESS and its' ability to identify internalizing students. Several teachers provided the feedback that the BASC-2 BESS did not provide enough questions regarding internalizing concerns and the internalizing category received significantly lower BASC-2 BESS

scores than those in the externalizing category. Given these two results, it seems valuable to evaluate the internalizing factor loadings for the BASC-2 BESS. If the BASC-2 BESS is deemed inadequate for internalizing concerns it may be more appropriate to pair the TNF with two measures, one for externalizing concerns (such as the Student Risk Screening Scale, Drummond, 1994) and one for internalizing concerns (such as the Student Internalizing Behavior Screener, Cook, et al., 2011).

Implications for School Screening

The first finding was that multiple teacher nominations do not necessarily indicate a higher level of risk status. This does not mean that multiple teacher perspectives are not valuable as multiple perspectives of a given student can provide information regarding the various aspects of a student's behaviors. Additionally, it is suggested that teacher nominations subjective (based on an individual teacher's notion of risk-status) and ipsative (based on the group of students that a teacher is considering) (Meade, 2004) thus creating difficulty when comparing students across various teachers. Multiple nominations of the same student do not seem to add any additional information regarding risk status, but individual teacher perceptions of a given student are valuable.

The second finding was that teachers' nominate and rank students who are actually at-risk according to the BASC-2 BESS. Seventy-four percent of students nominated in this study were considered to be in the elevated or extremely elevated risk zone according to the BASC-2 BESS. This indicates that the TNF identified a large proportion of students who are at-risk according to the BASC-2 BESS. As teachers ranked a student higher (more at risk) the percentage of at-risk students went up indicating that teachers are nominating and ranking students in an accurate manner. Additionally, statistically significant relationships were found

between TNF rankings and BASC-2 BESS scores in the internalizing, externalizing, and combined categories. This means that teachers' subjective and ipsative notion of student risk status were related to a normative level of risk and indicates that they were capable of determining which students were the most at risk.

The third valuable finding was that teachers have knowledge about and are willing to provide valuable information regarding the strengths and weaknesses in screening for at-risk behavior (Sprague et al., 2001; Youngstrom et al., 2000). The social validity data gathered from this study, specifically the comments provided by teachers, indicated several important things such as the need for screening instruments that include a broad spectrum of behaviors, the use of school data (e.g., absences, school discipline referrals), and the need for screening to lead to intervention. It seems important for school-wide screening to use the base of teacher knowledge in order to provide a feasible and efficient model for each individual school.

Conclusion

This study found that the rankings on the Teacher Nomination Form were concordant with the BASC-2 BESS at a weak to moderate level and the and the nominations on the TNF were highly related to BASC-2 BESS risk (74% of nominated students were at-risk) Additionally it was found that multiple teacher nominations are not generally indicative of a higher student risk status. Finally the social validity data suggested that teachers are neutral or somewhat agree with the use of this screening system. Their additional comments provided feedback regarding the adequacy of the BASC-2 BESS, the need to use school data like absences and grades, and the need for screening to lead to classification and interventions.

Further research is needed to understand the intricacies of SEBC and to determine what further data can be added to or removed from a screening system in order to identify students

who are considered to be at risk. Additionally data should be gathered regarding a third gate for this screening system in order to further delineate risk status of students.

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Table 1*Sample Demographics: Teachers*

| Characteristics | | Number of teachers from school 1 | % | Number of teachers from school 2 | % |
|--------------------------|------------------------------|----------------------------------------|------|----------------------------------------|-------|
| Gender | | | | | |
| | Male | 7 | 31.8 | 7 | 18.9% |
| | Female | 15 | 68.2 | 30 | 81.1% |
| Race/Ethnicity | | | 0.0 | | 0.0% |
| | American Indian | 0 | 0.0 | 1 | 2.7% |
| | Asian | 0 | 0.0 | 1 | 2.7% |
| | Black/African American | 0 | 0.0 | 0 | 0.0% |
| | Caucasian | 21 | 95.0 | 31 | 83.8% |
| | Hawaiian/Pacific Islander | 0 | 0.0 | 1 | 2.7% |
| | Hispanic | 0 | 0.0 | 1 | 2.7% |
| | Other | 1 | 4.5 | 0 | 0.0% |
| | Unanswered | 0 | 0.0 | 1 | 2.7% |
| Age | | | | | |
| | N | 22 | | 37 | |
| | Mean | 37.09 | | 42.70 | |
| | Standard Deviation | 11.68 | | 15.25 | |
| Number of Years Teaching | | | | | |
| | Mean | 9.45 | | 12.14 | |
| | Standard Deviation | 10.07 | | 10.78 | |

Table 2*Sample Demographics: Students*

| Characteristics | | Number of students from school 1 | | Number of students from school 2 | |
|-----------------------|------------------------------|----------------------------------------|-------|----------------------------------------|-------|
| | | | % | | % |
| Gender | | | | | |
| | Male | 133 | 66.8% | 221 | 69.5% |
| | Female | 66 | 33.2% | 97 | 30.5% |
| | Other | 1 | .5% | 0 | 0% |
| Race/Ethnicity | | | | | |
| | American Indian | 4 | 2.0% | 4 | 1.3% |
| | Asian | 1 | .5% | 5 | 1.6% |
| | Black/African American | 2 | 1.0% | 3 | .9% |
| | Caucasian | 159 | 79.9% | 258 | 81.1% |
| | Hawaiian/Pacific Islander | 1 | .5% | 2 | .6% |
| | Hispanic | 24 | 12.1% | 21 | 6.6% |
| | Other | 5 | 2.5% | 9 | 2.8% |
| | Unanswered | 4 | 2.0% | 16 | 5.0% |
| Grade | | | | | |
| | Seventh | 66 | 33.2% | 124 | 39.0% |
| | Eighth | 63 | 31.7% | 84 | 26.4% |
| | Ninth | 70 | 35.2% | 110 | 34.6% |

Table 3*Correlation between BASC-2 BESS and Teacher Rankings*

| BASC-2 BESS Correlation | Internalizing Rank | Externalizing rank | Combined Rank |
|----------------------------|--------------------|--------------------|---------------|
| Coefficient | .177** | .246** | .304** |
| Significance | .004 | .000 | .000 |
| N | 260 | 258 | 479 |

Note. **= correlation is significant at the .01 level

Table 4*Mean BASC-2 BESS scores by Number of Teacher Nominations*

| Tukey's HSD for One Nomination | Total Nomination Comparison Group | Mean Difference | Significance |
|-----------------------------------|--------------------------------------|-----------------|--------------|
| | 2 | -.091 | 1.000 |
| | 3 | -2.111 | .305 |
| | 4 | -2.466 | .647 |
| | 6 | -6.200 | .040 |

Table 5*Central Tendency and Standard Distribution of Social Validity Scores*

| | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | <i>Average</i> |
|--------|------|------|------|------|------|------|------|----------------|
| Mean | 4.93 | 5.32 | 4.42 | 5.81 | 5.11 | 5.53 | 5.04 | <i>5.16</i> |
| Median | 5 | 5 | 4 | 6 | 5 | 5 | 5 | 5 |
| Mode | 5 | 5 | 4 | 6 | 6 | 5 | 5 | <i>5.14</i> |
| SD | 0.96 | 0.83 | 1.22 | 1.11 | 1.13 | 0.97 | 1.24 | <i>1.06</i> |

Table 6*Internalizing Type 1 Error*

| TNF Rank (5 is the most at-risk) | <u>Actually at-risk according to the BESS?</u> | |
|-------------------------------------|------------------------------------------------|-----------|
| | Yes | No |
| 5 | 66.0% | 34.0% |
| 4 | 69.4% | 30.6% |
| 3 | 53.7% | 46.3% |
| 2 | 57.4% | 42.6% |
| 1 | 52.9% | 47.1% |

Note. The second column represents the ability of the TNF to accurately identify at-risk students according to the BASC-2 BESS. The third column represents Type 1 error.

Table 7*Externalizing Type 1 Error*

| TNF Rank (5 is the most at-risk) | <u>Actually at-risk according to the BESS?</u> | |
|-------------------------------------|------------------------------------------------|-----------|
| | Yes | No |
| 5 | 89.8% | 10.2% |
| 4 | 86.5% | 13.5% |
| 3 | 79.2% | 20.8% |
| 2 | 65.4% | 34.6% |
| 1 | 63.5% | 36.5% |

Note. The second column represents the ability of the TNF to accurately identify at-risk students according to the BASC-2 BESS. The third column represents Type 1 error.

Table 8*Combined Type 1 Error*

| TNF Rank (10 is the most at-risk) | <u>Actually at-risk according to the BESS?</u> | |
|-----------------------------------|------------------------------------------------|-----------|
| | Yes | No |
| 10 | 89.1% | 10.9% |
| 9 | 81.3% | 18.8% |
| 8 | 82.2% | 17.8% |
| 7 | 83.0% | 17.0% |
| 6 | 79.6% | 20.4% |
| 5 | 58.3% | 41.7% |
| 4 | 58.0% | 42.0% |
| 3 | 48.0% | 52.0% |
| 2 | 59.2% | 40.8% |
| 1 | 51.0% | 49.0% |

Note. The second column represents the ability of the TNF to accurately identify at-risk students according to the BASC-2 BESS. The third column represents Type 1 error.

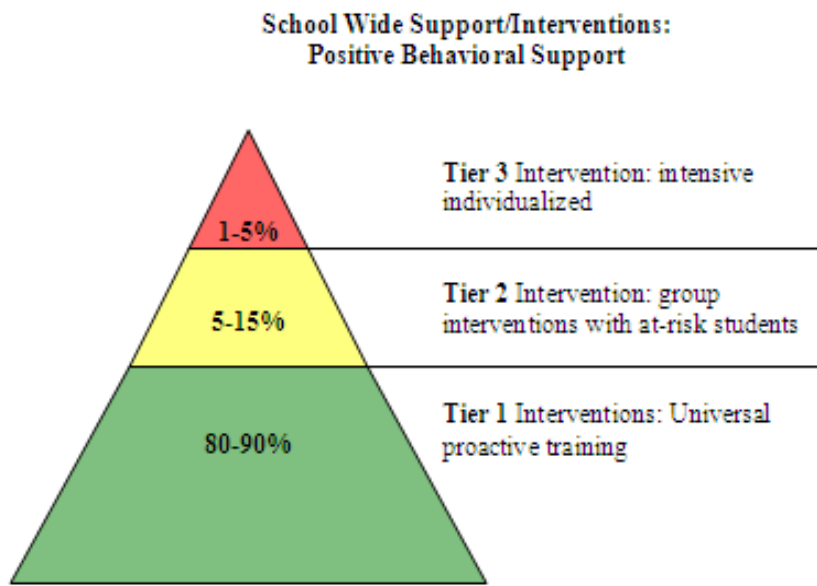


Figure 1. The Positive Behavioral Support model triangle which indicates the estimated amount of students needing interventions at school-wide, small group, and individualized levels.

Appendix A: Teacher Nomination Form

Demographic Information Needed for Research Purposes

| | |
|-------------------------------------------------------------|-------|
| Teacher initials | _____ |
| Teacher subject taught | |
| Teacher gender | |
| Teacher age | |
| Teacher ethnicity | |
| Number of years as an educator (including the current year) | |
| Highest degree earned | |
| Year highest degree earned | |

Introduction

Helping students with social, emotional, and behavioral concerns is a major demand of teacher time and expertise. We are developing a way for schools to identify students that may have social, emotional, and behavioral concerns in middle schools so that these students can benefit from early interventions. These concerns tend to be identified in two categories: externalizing and internalizing. Youth with externalizing concerns tend to disrupt others with their negative behavior. On the other hand, students with internalizing concerns may seem sad, lonely, or anxious. This research will ask you to nominate and rank students as at-risk for internalizing concerns or externalizing concerns.

Teacher Nomination Form
Externalizing Behaviors

Please read through the following examples and non-examples of externalizing behaviors. Then nominate five students who most clearly exhibit behaviors consistent with the examples listed below. Rank those students with 1 being the student who is demonstrating the most concerning externalizing behaviors and 5 being the student who is displaying the least concerning externalizing behaviors. **Each ranking, 1-5, can only be used once.**

A student may only be nominated in **ONE** category, either externalizing or internalizing. If a student seems to meet the criteria for both, decide which category is more fitting and circle yes in the far right column indicating the student exemplifies internalizing and externalizing behaviors.

| Examples of Externalizing | Non-examples of Externalizing |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> Seeks attention through negative behavior Is aggressive towards people or things Disobeys rules Annoys others on purpose Defies adults Acts without thinking | <ul style="list-style-type: none"> Has good self-control Behaves appropriately when not supervised Is attentive in class Follows teacher directions Completes tasks without bothering others |

| Student Initials | Male/Female | Ranking (1-5) | Would you have liked to put them in both categories? |
|------------------|-------------|---------------|------------------------------------------------------|
| --- --- | M/F | | Y/N |
| --- --- | M/F | | Y/N |
| --- --- | M/F | | Y/N |
| --- --- | M/F | | Y/N |
| --- --- | M/F | | Y/N |

Teacher Nomination Form
Internalizing Behaviors

Please read through the following examples and non-examples of internalizing behaviors. Then nominate five students who most clearly exhibit behaviors consistent with the examples listed below. Rank those students with 1 being the student who is demonstrating the most concerning internalizing behaviors and 5 being the student who is displaying the least concerning internalizing behaviors. **Each ranking, 1-5, can only be used once.**

A student may only be nominated in **ONE** category, either externalizing or internalizing. If a student seems to meet the criteria for both, decide which category is more fitting and circle yes in the far right column indicating the student exemplifies internalizing and externalizing behaviors.

| Examples of Internalizing | Non-examples of Internalizing |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> Seems sad or depressed Avoids social situations Seems lonely Acts anxious or worries Shows low energy or seems lethargic Has frequent physical complaints | <ul style="list-style-type: none"> Participates easily in classroom discussion Recovers quickly when criticized or teased Seems to enjoy working in a group When greeted by others, responds positively. |

| Student Initials | Male/Female | Ranking (1-5) | Would you have liked to put them in both categories? |
|------------------|-------------|---------------|------------------------------------------------------|
| --- --- | M/F | | Y/N |
| --- --- | M/F | | Y/N |
| --- --- | M/F | | Y/N |
| --- --- | M/F | | Y/N |
| --- --- | M/F | | Y/N |

Teacher Nomination Form

Combined Ranking: Externalizing/Internalizing

*Of the students you ranked for externalizing and internalizing behaviors, create a **combined** ranking list with 1 being the student who displays the most concerning behaviors and 10 being the student who displays the least concerning behaviors.*

| | Ranking (1-10) | Student Initials | Male/Female |
|-----------------|----------------|------------------|-------------|
| Most at risk → | 1 | _ _ _ | M/F |
| | 2 | _ _ _ | M/F |
| | 3 | _ _ _ | M/F |
| | 4 | _ _ _ | M/F |
| | 5 | _ _ _ | M/F |
| | 6 | _ _ _ | M/F |
| | 7 | _ _ _ | M/F |
| | 8 | _ _ _ | M/F |
| | 9 | _ _ _ | M/F |
| Least at risk → | 10 | _ _ _ | M/F |

Appendix B: Screening System Social Validity Form

| Circle ---To what extent do you agree with the following statements? | | | | | | | |
|-------------------------------------------------------------------------------------------------------------|--------------------------|-----------------|--------------------------|----------------|-----------------------|--------------|-----------------------|
| | Strongly Disagree | Disagree | Somewhat Disagree | Neutral | Somewhat Agree | Agree | Strongly Agree |
| 1) This screening system meets the needs of screening for students at-risk for SEB | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2) Screening for students at-risk for SEB through this system is feasible within my current school | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3) This screening system was more effective at identifying at-risk students than my school's current system | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4) This screening system was conducted in a timely manner. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5) Most teachers would find this system effective. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6) This screening system is appropriate for middle school students. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7) This screening system adequately identifies students who are at-risk. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Additional Comments: | | | | | | | |

Appendix C: Literature Review

This review will first provide a distinction between Social, Emotional, and Behavioral Concerns, and Emotional and Behavioral Disorders (EBD). Then a general understanding of Emotional and Behavioral Disorders (EBD) and the regulation of EBD through the U.S. Department of Education will be provided. A review of the two manners in which EBD is displayed is discussed: internalizing and externalizing. Next, the current Positive Behavioral Support model of school intervention and prevention will be explained. Then a review of what is recommended for a screening process and what current EBD screeners are in existence is provided. Finally, an explanation of the need for this project is described, as defined by the spectrum of EBD needs and screening requirements.

SEBC versus EBD

Social, Emotional, and Behavioral Concerns (SEBC) are those which encompass a broad scope of difficulties a student or child is facing. The most severe level of an SEBC may be considered the special education category of Emotional and Behavioral Disorder (EBD, often called a Serious Emotional Disturbance, SED). There are federal regulations regarding what constitutes an EBD (Code of Federal Regulations, 2012), but there are different opinions regarding the definition and inclusiveness of the federal regulations (Olympia et al., 2004; Walker, Nishioka, Zeller, Severson, & Feil, 2001), potential biases when universally screening for a special education category, and concerns when screening for a specified category.

The main area of concern regarding EBD inclusiveness is that children with the classification of “Social Maladjustment” are denied services because of an exclusionary clause in the federal regulations definition of EBD. A comment in the U.S. Department of Education’s

Federal Register (2006) elaborated on this concern by stating “there is no accepted definition of the term, and no valid or reliable instruments or methods to identify children who are, or are not, ‘socially maladjusted’” (p 46549). The Department of Education reported they were not able to reach a consensus on how to change the classification and thus decided that the EBD classification would retain its original 1977 definition with the Social Maladjustment exclusion (2006). The current Code of Regulations (2012) still states that the term of EBD or SED “does not apply to children who are socially maladjusted, unless it is determined that they have an emotional disturbance.”

The lack of consensus of the exclusionary clause in EBD’s definition creates difficulty in universally defining and screening for EBD. Social Maladjustment can be viewed in vastly different ways by organizations, school districts, and individuals (Olympia et al., 2004) and the existence of a distinct Social Maladjustment is questionable. One study found that the majority of students with an EBD (70%) also experience Social Maladjustment (Wagner et al., 1991). Additionally, Nishioka (2001) found no significant differences between 15 previously diagnosed EBD boys and 15 previously diagnosed Social Maladjustment boys on the Child Behavioral Checklist and the School Social Behavioral Scale. This suggests that there the difficulty in distinguishing between EBD and Social Maladjustment. This unclear distinction is concerning as it makes it nearly impossible to develop a screening system that addresses a exclusively accepted EBD classification. Individual and school district perceptions of Social Maladjustment will affect their expectations of a screening system as well as the manner in which they use a screening system.

Not only is the category of Social Maladjustment concerning when attempting to classify students with EBD, there is often bias or inaccurate perceptions associated with special education or other classifications. Vignette research has found that teachers perceive students with EBD as having significantly lower interpersonal capabilities when they're compared to students with a Conduct Disorder or no diagnosis (Fox & Stinnett, 1996). Teachers may therefore have more difficulty considering behaviors of a student when they are viewing them in the context of a special education classification. This notion is further supported by research on teacher perceptions of ADHD which shows teachers and parents perceive students with ADHD as having lower academic capabilities and higher levels of impairments than actually exists (Eisenberg & Schneider, 2007; Ohan, Visser, Strain & Allen, 2011).

In addition to the tendency toward inaccurate perceptions of students identified as needing special education services, teachers who view a student in the context of special education may perpetuate their biased views. Teachers may unintentionally treat a student they've screened for EBD as having lower academic achievement or lower social ability. It's clear that teacher's expectations influence student achievement (Boer et al., 2010; McKown & Weinstein, 2008; Rubie-Davies et al., 2010). Training and education help prevent these biased views (Bell, Long, Garvan, & Bussing, 2011), but it cannot be expected that this will be provided in every school. If it's recognized that bias be perpetuated, it seems important to help teachers generally consider risk status outside of a special education category.

An final and key reason to consider at-risk students outside of EBD is to help make a universal screening system rather than a diagnostic system. Screening systems help identify students who exhibit worrisome behaviors and may have more serious concerns later, whereas a

diagnostic tool diagnoses the symptoms of a person who is already manifesting a specific problem (Glover & Albers, 2007; Young et al., 2011). By screening for students at-risk for SEBC, students with at-risk behaviors may be identified, rather than only identifying those students who meet the qualification for special education. Only around 5% of the school population are served by special education (Walker et al., 2005) but approximately 33% of school-aged students use school or community services for mental health concerns (Farmer et al., 2003). By broadly considering students with at-risk behaviors it allows a school to identify those who are at-risk for EBD while also identifying those students with more general SEBCs that may not reach the level of an EBD.

Given these areas of concern, it seemed important to create a broad category of classification that acted as a screener for varied Social, Emotional, and Behavioral Concerns (SEBC). Dr. Young's research team accomplished this goal by looking at the larger and broader classification of SEBC which allowed for a standardized definition and less biased notion of risk status. SEBC describes a general area of student concerns without classifying a student with a specific disorder or special education classification. The most severe type of SEBC is an EBD, and this project engaged in screening for SEBC in order to identify students who may be at-risk for EBD. By screening for students at-risk for SEBC, students at risk for EBD can be identified while including all students at-risk for general concerns and preventing bias associated with a special education category.

Special Education Regulations

Over the years, Special Education regulations were developed and modified in order to help schools meet the needs of students. In 1990, IDEA was instituted, taking the place of the

1975 Education of All Handicapped Children Act (EAHCA). The IDEA is mandated by the federal government and requires that schools receiving federal funding address the needs and provide appropriate services to children in the public school system that have disabilities. This regulation provides services to students who are identified in these disability categories: Deaf-Blind, Deaf/Hard of Hearing, Developmental Cognitive Disability, Other Health Disability, Physically Impaired (PI), Traumatic Brain Injury (TBI), Visually Impaired, and Emotional Behavioral Disorders (EBD).

As IDEA has evolved, the Response to Intervention (RTI) model has been incorporated into federal law in efforts to influence practice. RTI facilitates the early identification of students who may have learning or behavioral difficulties, with early identification leading to prevention and early intervention efforts. There is a good deal of research about early identification of students at different ages with academic problems (Boscardin, Muthen, Francis, & Baker, 2008; Dowker, 2005; Gersten, Jordan, & Flojo, 2005; Jones, Dodge, Foster, Nix, & Conduct Problems Prevention Research Group, 2002; Leung, Lindsay, & Lo, 2007) and behavioral difficulties (Lane, Gresham, MacMillan, & Bocian, 2001; Pšunder, 2010). There also is research on early identification on students with EBD in elementary schools (Forness et al., 1998; Kamps, Kravits, Stolze, & Swaggart, 1999). However, identification of students with behavioral or emotional concerns in secondary school settings has had limited attention in the research literature or in practice (Lane & Carter, 2006).

Emotional and Behavioral Disorders are an area of concern for schools, and screening for EBD is complex and difficult because identifying maladaptive behaviors is different than identifying a physical disability (Severson et al., 2007). Screening should play an important role

in providing timely services to youth. According to a nationwide survey of mental health needs, it was found that only 24% of those children/adolescents who have emotional and behavioral needs are receiving any care (Ringel & Sturm, 2001).

Early Intervening Services (EIS)

The Early Intervening Services (EIS) regulation holds that Local Educational Agencies (LEAs: schools and school districts) need to use interventions in order to help strengthen their ability to detect and serve students in need. Since it has been suggested that EBD identification process warrants further research, specifically in secondary schools, the use of EIS may enable schools to intervene early. The regulation supports the education of teachers and staff in scientific/behavioral interventions and requires LEAs to reserve funds specifically for EIS (U.S. Department of Education Office of Special Education Programs, 2007).

If scholastic institutions intend to implement EIS, they need a system of screening that is empirically supported for the specific age group that they are targeting. In order for adolescents with or at risk for EBD to have their needs met, an adequate screening/intervention approach needs to be developed based upon understanding of EBD and the adolescent symptomology associated with it. A good screening measure requires certain aspects such as universality, pragmatic value, and identification of both internal and external behaviors. In order to create the context for understanding an appropriate screening system for EBD, a brief understanding of the two main categories of EBD symptoms: internalizing and externalizing should be addressed.

Internalizing Symptoms

Internalizing behaviors are considered to be covert and are less implicit than external displays (Reynolds, 1990). Internalizing disorders are associated with anxiety, dysphoric mood,

somatic symptoms, and social withdrawal (Merrell & Dobmeyer, 1996; Reynolds, 1990). As a child or adolescent has an increased elevation of internalizing behavior they may also experience low self-esteem and low quality of parent-child relationship (Bolme-Lake, 2007). Again though, the concept of an internalizing symptom is associated with an internal feeling and display such as a student seeming shy and inhibited, when really they may be experiencing depression but are unsure about how to share their feelings. This makes understanding, noticing, and screening for internal disorders more difficult than noticing external displays (Reynolds, 1990).

This idea of a covert, internal display being less noticeable in current behavioral displays is mirrored in the lack of pre-1980s empirical research. Historically, internalizing behaviors as disorders were not as extensively studied when compared to externalizing behaviors until the 1980's. The 1980 American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, Third Edition (DSM-III) helped bring more attention to internalizing disorders with a section dedicated to Internalizing Disorders in Children and Adolescents (Reynolds, 1990). The DSM discusses anxiety, depression, somatic disorders, schizophrenia, social withdrawal, and suicidal behavior (American Psychiatric Association, 1980). During the 1980's, more extensive research of internalizing disorders such as eating disorders (Laessle, Tuschl, Waadt, & Pirke, 1989; Levy & Dixon, 1985), anxiety disorders (Rodriquez & Routh, 1989), and depression (Mitchell, Varley, & McCauley, 1988; Reynolds, 1986) was published.

The recognition of internalizing behaviors in empirical research was an important step in studying screening for internalizing behaviors, but the covert nature of internalizing disorders makes them difficult to observe (Reynolds, 1990). This can create some challenges in the screening process when teachers are asked to report the behaviors that appear to note at-risk

status of students who tend to have internalizing behaviors. Several screening and diagnostic measures (Eyberg Child Behavior Inventory (ECBI; Eyberg & Pincus, 1999), Strength and Difficulties Questionnaire (SDQ; Goodman, 1997), the Student Risk Screening Scale (SRSS; Drummond, 1994) place a strong emphasis on the externalizing symptoms of EBD, emphasizing those behaviors that disrupt a classroom environment and are easily observed. The prevalence of internalizing disorders is difficult to estimate, but overall there seems to be a high prevalence with child and adolescent populations. Approximately 4-6% of children and adolescents experience depression and 3-4% experience anxiety, and the categories of social withdrawal and somatic symptoms more difficult to detect (Merrell, 2008). Those with persistent internalizing disorders during adolescence are more likely to have an episode of adult mental disorder (70.6%) when compared to those with a single episode of internalizing (33.3%) or those with no adolescent disorder (25.2%; Colman, Wadsworth, Croudace, & Jones, 2007). Given these outcomes it is important to emphasize internalizing behaviors for those students who are at-risk for EBD although those behaviors are more difficult to detect.

Externalizing Symptoms

Externalizing behavior includes aggression, rule-breaking, hyperactivity, and impulsivity (Maschi et al., 2008; Reynolds, 1990; Sprague et al., 2001). In general, externalizing behaviors have historically received more attention in the research literature than internalizing behavior, as external problems are more readily noticed (Reynolds, 1990). Externalizing tendencies are more readily noticed by teachers in the school environment. Behaviors such as getting out of one's seat, interrupting class, and acting defiant are more notable and disruptive than internalizing behaviors (Emens, 2008; Merrell & Dobbmeyer, 1996).

Externalizing behavior problems in childhood or early adolescence are of concern due to risk factors associated with out of school problems. One study examined risk factors for externalizing problems in secondary schools in a city in Hungary and the U.S. and found a relationship between externalizing behavioral problems and gang activity, drug use, and binge drinking (Piko, Fitzpatrick, & Wright, 2005). Preadolescent students with externalizing behavior problems, as measured by peer rejection, aggression, and school problems, are associated with late adolescent delinquency and school drop-out (Knipersmidt & Coie, 1990). By gaining an understanding of how students at risk for EBD may display their symptoms and by understating what factors may be occurring simultaneously with external behaviors, schools may be able to intervene in positive and effective ways.

Gender and Cultural Issues

It should also be noted that there are gender and cultural considerations to attend to when screening for EBD. First regarding gender issues, there needs to be recognition of the gender differences of acting out either internally or externally. Boys, when compared to girls, are overrepresented in Special Education (Arms, Bickett, Graf, 2008) and are more often identified as both externalizers and internalizers (Young, Sabbah, Young, Reiser, & Richardson, 2010). Girls though, when they do express themselves, more often display internalization than externalization (Daughters et al., 2009; Maschi et al., 2008; Merrell & Dobbmeyer, 1996). Females are more likely than males to express feelings of self-hate, anhedonia, negative body image, and somatic symptoms (Bailey, Zauszniewski, Heinzer, & Hemstrom-Krainess, 2007). Alternatively, external displays are more often associated with males (Maschi et al., 2008). One study found that males and females experiencing depression act in different manners. Adolescent

males were more likely to express their symptoms in an external manner through poor interpersonal interactions whereas adolescent females expressed depression internally, through somatic symptoms and anhedonia (Bailey et al., 2007). These differences between males and females are important to consider when developing and evaluating screening instruments.

There may also be a racial aspect of external behaviors. One study examined adolescents with low tolerance for distress and found that Caucasian adolescent males are more likely to drink alcohol, while African American adolescent males are more likely to perform delinquent acts (Daughters et al., 2009). Also, cultural differences with regards to EBD interventions should be considered. One study looked at Latino Americans who experience EBD and found there are cultural needs to consider such as: family differences, teacher interactions, and peer interactions. Family differences may be explained by a lowered parental involvement with their children's school life, including homework and intervening with school problems. Teacher interactions may be explained by the desire of Latin American students to have a caring and supportive teacher who provides them with one-on-one time. Finally peer interactions may be different in that Latin American students discussed their difficulties with racial slurs and discrimination (Balagna, 2008). It is important then to mention that EBD is usually manifest quiet differently and is influenced by gender and ethnicity; different needs should be considered and addressed on the individual level.

Early Intervention for At-Risk Youth

A substantial amount of research has documented that early identification and intervention for students who have behavioral and emotional difficulties is quite beneficial (Allen-DeBoer et al., 2006; Cook, et al. 2008; Lien-Thorne & Kamps, 2005; Regan et al., 2005;

Rivera et al., 2006). Intervening early, with empirically supported treatment, helps reduce symptoms and improves educational outcomes (Hazel, 2007). It has been suggested that improvement in educational outcomes may provide students with EBD more of the skills necessary to be successful in adult life (Jolivette et al., 2000). Although interventions have the potential to increase scholastic success (Lien-Thorne, & Kamps, 2005; Regan et al., 2005; Rivera et al., 2006), any interventions used should be empirically supported and based on factors that are connected to the decreasing problematic behaviors and increasing emotional wellbeing and positive behaviors.

Three factors that have been found to lessen symptoms and positively influence students who may be experiencing internalizing and/or externalizing behaviors are family connectedness, school connectedness, and academic achievement (Hall-Lande et al., 2007). Interventions that are based on protective factors enable positive outcomes for students with a risk status. Although family connectedness is a protective factor, it isn't readily achievable within the school environment. The areas though of school connectedness and academic achievement can be addressed through school based interventions and should be considered within school intervention plans.

Interventions within the school environment have the potential to help improve outcomes of students who have EBD. Considering school connectedness, a feeling of social support and belonging helps a student feel more connected to their school and provides them with the social/emotional aspect of learning. Through things such as social skills training, students at-risk for EBD can learn more positive ways to associate with and relate to their peers, which is associated with a lessening of maladaptive behaviors (Cook, et al., 2008). Considering academic

achievement, feelings of efficacy in school help students gain esteem and enjoy a school experience. Things such as individualized reading instruction (Rivera et al., 2006) and expressive writing journals (Regan et al., 2005) have been found to significantly improve academic outcomes of students with EBD.

Current PBS Model of Receiving Treatment

In schools, creating a means of prevention and early intervention for behavioral and emotional concerns of students can best be done when there is a systematic effort to meet the needs of all students. PBS is a model that focuses on having a strong core curriculum with positive behavioral expectations that are explicitly taught and reinforced. When the universal prevention efforts do not meet the needs of students targeted, selective interventions can be used. By developing a model of intervention and prevention, a school team will help integrate screening and intervention systems into regular school practice as well as enable an entire school staff to engage in similar behaviors when interacting with students. By developing a general approach to behavioral interventions, all staff may feel a part of a system that provides students with a positive, proactive approach to school. Although some schools participate in reactive models to behaviors, such as zero tolerance policies, out of school suspensions, and metal detectors, etc. these strategies tend to have negative influence on student bodies (Curwin, & Mendler, 1999; Harvard Civil Rights Project, 2000).

A well accepted, effective, and empirically supported model of intervention and early intervention is known as Positive Behavioral Support (PBS). PBS is a mode of intervention and prevention that uses scientifically supported research to detect and monitor problems faced by students. The PBS model traditionally implements several strategies to promote adaptive

behaviors at school: positive reinforcement for positive behavioral change, monitoring of student behavioral progress, use of universal behavioral and academic screening, and a multi-tiered intervention system with more intensity based on greater student need (OSEP, 2000). The initial intention of PBS was to serve students with severe disabilities, encouraging behavioral change without reactive methods. Currently, PBS is used at both universal and individual levels, addressing the behavioral needs of all students and providing more intense individual intervention when necessary (OSEP, 2000).

The four founding features of PBS are behavioral science, practical interventions, lifestyle outcomes, and a systems perspective (OSEP, 2000). One of the fundamental ideas of PBS is that behaviors can be changed and that the environment influences behaviors. Through gathering of behavioral data, practical interventions are developed and implemented for individuals. The PBS triangle of behavioral intervention (see Figure 1) explains the multi-tiered approach to behavioral change, with more intense services and interventions for those students with increased behavioral needs. Effective interventions, in terms of PBS, do not just mediate problems to make school staff jobs easier; they focus on teaching new behaviors that will generalize beyond the school hours. Finally, PBS focuses on a systems perspective, as an entire school is involved in facilitating change, rather than an individual teacher. As teachers work together with specific goals for individual student progress, students have a greater potential for success (OSEP, 2000). Through individual and school-wide interventions, PBS improves the ability of a school to provide students with a superior education (Bryer & Beamish, 2005). With a PBS framework it enables a school to provide services and interventions at an individual level—furthering the identification of students who are at-risk.

Typically, screening is implemented within a PBS model in order to identify which tier of services a student needs. However, if a school does not have a PBS model, the school should examine the feasibility of a general intervention being implemented within their current model. First, school teams need to be able to implement behavioral measures within the school environment rather than using outside sources because school staff integration increases the normal function of a screening system within a school. This occurs because teachers and administrators that are fully involved in a screening process better understand the purpose and use of data results as they were the creators of the data. Second, there needs to be staff support for interventions and screening. Without support, staff may feel the screening system and interventions are more hassle than help, making the system fail. Third, social skills training should be implemented within the school curriculum as a part of school-wide intervention. With social skills training, students will learn behaviors that lead to positive reinforcement rather than punitive systems of interaction. Finally, assessments and data, rather than just opinions, need to be used to determine behavioral interventions (OSEP, 2000). With these concerns addressed, a positive model of intervention and prevention has the potential to succeed within a school. After an overall model or a specific intervention is established, social validity, or viability of an intervention within a school, should be gathered from teachers to make sure it has the potential to succeed (Schwartz & Baer, 1991).

EBD Screening

In order to provide a continuum of interventions, schools often implement a Tier 1 level of universal prevention and additionally implement Tier 2 and Tier 3 interventions on an as needed basis. Those Tier 2 and Tier 3 interventions help remediating risk factors for behavioral

problems. To determine which students are appropriately served through Tier 2 (small group, targeted interventions) and Tier 3 interventions (individualized treatment and functional behavioral assessments), a method for multi-tiered identification is needed. This dissertation focuses on screening for students at risk for EBD within a PBS model.

When examining behavioral problems, there may be two development stages to consider: early starters and late starters (Moffitt, 1993). Early starter data should consider children and may be gathered in elementary schools (Jones et al., 2002). Late starter data should consider adolescents and may be gathered in secondary settings often with teacher report used for data. When addressing EBD, middle school (6-8th grade) is a time when many students are vulnerable to developing EBD, making middle school an important time to gather data (Lane et al., 2007). The peak of criminal offenses occurs during mid-adolescence (15-16) and it would seem by addressing behavioral concerns before that age, fewer offenses may occur (Moffitt, 1993).

A well-developed screening measure has been created for the elementary school level, the Systematic Screening measure of Behavioral Disorders (SSBD, Walker & Severson, 1992), but this measure uses elementary age descriptors for teachers to nominate students about whom they are concerned. These behavioral descriptors may not be adequate for an early adolescent population. Although this measure has been previously used with adolescent populations (Caldarella et al., 2008; Richardson, Caldarella, Young, Young, & Young, 2009; Young et al., 2010), the developmental appropriateness of the behavioral descriptors has not been evaluated.

Research completed in the Spring of 2011 evaluated the usefulness and accuracy of an updated list of descriptors of at-risk behaviors for early adolescent youth. With a developmentally appropriate list of behavioral descriptors, the likelihood of screening in a way

that is has evidence of validity is more likely. There are important developmental differences between elementary students and early adolescent students (Muscott, 1997) and measures used to screen or evaluate these students should reflect the developmental differences (American Educational Research Association, AERA, 1999).

Characteristics of Effective Screening Processes

Early intervention and prevention efforts can address the needs of students at risk for EBD, but the process requires a means of screening and identification in order to provide services that fit the identified needs of the students (Walker et al., 2005). An effective, efficient screener is needed in order to respond to the respective needs of students (Severson et al., 2007). It is important to note that a screener is needed, rather than a diagnostic instrument. A screener is intended to use symptoms as a means to identify students who may be facing potential problems, whereas a diagnostic tool is intended to diagnose the symptoms of a person who is already manifesting a specific problem (Glover & Albers, 2007). With the idea of a good screener in mind, the following are two areas to consider as a rationale for EBD screening: screening occurs regularly and early in the educational settings, and it is universal, which means that all students are considered in the process.

The first consideration of screening is that schools need early and regular screening, often biyearly, in order for educators can intervene before students who are at risk for EBD develop symptoms of a greater severity. When screening is not done regularly, identification of a student as at-risk may occur too late for meaningful intervention (Gresham, MacMillan, & Bocian, 1996). Often students are not identified until they have already experienced the severe negative symptoms that include academic delays and increased negative behaviors associated with EBD

(Nishioka, 2001). With no or limited school-based interventions the likelihood of academic failure, dropout, and general deficiencies increases making positive future prospects unlikely (Bradley, Doolittle, & Bartolotta, 2008; Frank, Sitlington, & Carson, 1995; Stanard, 2003) In order then to identify students as at-risk for EBD, screening should be done on a regular basis (Kazdin, 1987; Walker et al., 2005).

Just as screening should occur early and regularly, screening should be done on a universal level. Universal screeners include all students in the initial gate, (Glover & Albers, 2007). They aid in identifying problem behaviors that inform a school team about who needs interventions and the intensity of interventions, preventing problem behaviors from growing in severity (Levitt, Saka, Romenelli, & Hoagwood, 2007). Following the PBS model of intervention, universal screening gives all students the opportunity to be considered for additional help, and establishes a base for the all tiers of prevention and intervention (Kern et al., 2009; Walker et al., 2005).

Once the environmental requirements (universality and regularity) of a screener have been considered, it seems important to consider other important aspects of data collection. Choosing data sources is an important first step. If screening is to be done on a universal level, it is important to consider more than one source of data in a screening process (Sprague et al., 2001). Rather than using a single test or observation to screen for EBD, using multiple sources allows a screening system to consider multiple perspectives about students ensuring those identified do have needs that require intervention (Severson et al., 2007).

A common approach to screening is called the *multi-gate* procedure. The multi-gated approach is able to identify and distinguish those students who need moderate help from those

who need more targeted, individualized interventions. Use of multiple gates also serves to determine false positives, students who may have initially been identified as at-risk, but with further testing are found not to need additional help. Through multiple gates a screener can also determine a student's level of risk and need with more surety than with one gate. Students may be screened and found to need additional help, but this help can vary from mild, to moderate, to intense needs. Using a comprehensive screening process, school teams can focus existent resources to meet the specific needs of students that were identified through the screening process (Walker et al., 2005).

Psychometric Properties of Effective Screeners

Although it is important to use more than one source of data, it is equally important to ensure that each instrument or source has proper psychometric properties: reliability and validity. Reliability is considered the repeatability or consistency of a test, and validity is considered the accuracy or ability of a test to measure what it intends to measure (Glover & Albers, 2007). With that in mind, each gate and source should have evidence of reliability and validity.

Reliability. Reliability is highly important as it sets the threshold of validity, meaning a test can be no more valid than it is reliable. The two areas of reliability that should be considered are internal reliability and external reliability. Internal reliability refers to the consistency of a measure *within* itself, this may be addressed with internal consistency. The second type of reliability is external reliability, looking at the consistency of a test when considering more than one use (different time or different person). External reliability is considered through test-retest reliability and inter-rater reliability. (Glover & Albers, 2007)

Internal consistency measures whether the items on a measure are measuring the same construct (Glover & Albers, 2007). This is obtained in two ways: split-forms or alternate-forms. If individual items on the test are considered to be measuring the same construct, then if the test were split in half, those items that are the same should be answered in a similar manner. If the statements: I am feeling blue and I am feeling sad, appear on an instrument, then the respondent should answer in a similar way to both questions.

Test-retest reliability measures whether a test provides consistent results over time (Lane et al., 2007). By assessing test-retest reliability statistics a researcher can indicate whether a test scores are trustworthy over time. Test-retest reliability may be low due to an individual's change over time (maturation) or the inconsistency of a test (Glover & Albers, 2007). With regards to EBD, test-retest reliability should be high in order to determine the consistency of scores to measure a level of functioning. This should be consistency over a short period of time, usually the second test is completed within a month of the first. A student shouldn't be identified as at-risk for EBD one week and then considered not a concern the week after, making test-retest reliability important for showing consistent results over time (Glover & Albers, 2007).

Inter-rater reliability indicates the ability of different sources to provide similar answers, in screening for EBD it is usually a parent, teacher, or self-report (LeBreton & Senter, 2008). It is important to note that the respondent should have an adequate relationship with the students being screened in order for them to provide an accurate description of student behavior. Inter-rater reliability helps researchers and test users to understand if different responders are capable of accurately describing a student and this type of review has been conducted with first gate EBD forms (Kamphaus & Reynolds, 2007; Walker & Severson, 1992). This requires multiple sources

(teacher, parent, and student) to complete a form regarding a student, after which the different forms are compared to provide information regarding the reliability of a source. Within the school system, teachers frequently complete rating scales for students; it has been found that teachers are considered a reliable source of information (Loeber, Green, Lahey, & Stouthamer-Loeber, 1991). Although parental and student self-reports tend to have a higher correlation with each other, teachers, who only see students for approximately 30 hours a week, have been found to do a sufficient job of screening students (Sprague et al., 2001; Youngstrom et al., 2000). Teachers serve in a supervisory role, see students in multiple contexts, and have a sense of abnormal behavior as they observe a variety of youth over time, therefore they provide a reliable assessment of student difficulties.

Validity. *Predictive validity* is the ability of a measure to accurately predict outcomes for students, provided that no interventions are delivered. Simply stated, if a screener declares a student as at-risk, that student is predicted to develop the concerns for which they are being screened. This is measured through sensitivity, specificity, positive predictive power, and negative predictive power (Glover & Albers, 2007). Sensitivity is the ability of a test to accurately detect true positives, or of those students who are at-at risk for EBD, what proportion of those at-risk are identified as at-risk for EBD. Specificity is a test's ability to identify true negatives, or those students who are not at-risk for EBD, how many of them are accurately screened as being not at-risk for EBD. Positive predictive power is, of those students who are screened as-risk for EBD, what is the proportion of those students who actually are at-risk for EBD. Negative predictive power is, of those students who are screened as not at-risk for EBD,

what proportion really are at-risk for EBD (Glovers & Albers, 2007; Hill, Lochman, Coie, & The Conduct Problem Prevention Research Group, 2004).

Content validity is the ability of the screener to accurately cover the behavioral domain being screened, in this case, EBD. Behaviors may be exhibited through internal or external means; therefore, a screening measure that only captures one area of behavioral concerns is not capturing the entire domain and would not have high content validity. One example is the Student Risk Screening Scale (SRRS, Drummond, 1994), which is a brief seven question behavioral screener developed to indicate anti-social behaviors, which focuses exclusively on externalizing behaviors. This screener was evaluated and found to have high convergent validity with an EBD screener, the Strengths and Difficulties Questionnaire (Goodman, 1997). However, given the externalizing focus of the SRSS, it is limited in its ability to capture the entire content of EBD—internalizing and externalizing (Lane et al., 2007). To ensure that a screening process does have high content validity the following considerations should be addressed: based in the EBD literature for content and for age-appropriateness and then validated by experts in the field of EBD for content and age-appropriateness. Age-appropriateness is an important consideration for content validity because the validity evidence of a test's content is questionable when the test is used in manner that differs from its original intention (AERA, 1999, p 12). An entire screening process is not likely to be developed for a variety of developmental levels such as children, adolescents, and adults. There are different needs, concerns, and acting-out activities that occur at different ages (Volz & Cook, 2009; Dogan-Ates, 2010), and age-appropriate screening systems are necessary. That does not necessarily mean a single measure cannot be developed for a child and adolescent population, but rather an entire system of screening could be modified for

different age needs or originally designed to meet the developmental needs of a variety of students.

Convergent validity is the ability of a measure to provide similar results when compared to instruments that are measuring the same construct (Lane et al., 2007). It is important to consider an instrument, especially if it is new, by comparing it to an instrument that already has shown adequate psychometric properties. Through this comparison, newer measures, which may have different approaches (quick completion time, less-intrusive, age appropriate) are deemed appropriate as validated through previous measures.

Additional sources of data. Through use of a valid and reliable first gate in a screening process, students who progress to second and third gates are more likely those students who are actually at-risk, but the subsequent gates used should also have evidence of validity and be sufficiently reliable. The use of a nationally norm-based test as a second or third gate is a reasonable potential source of data. Using a norm referenced instrument as a second gate facilitates the use of national norms to determine the level of concern.

It also should be noted that student data can also be an important source of information. Information about absences, discipline referrals, and grades or assignments completion provide an understanding of student risk and information regarding future student problems (Sprague et al., 2001). There is substantial evidence that these measures will contribute to a robust screening process (Sprague et al., 2001; Tobin & Sugai, 1999).

Pragmatic Value/Usability. Although a screener may have robust psychometric properties, a screener is only valuable if it has pragmatic value. If teacher-completed ratings are a common screening tool, then the process or instrument must take a reasonable amount of

valuable teacher time to complete. The test must be brief and yet thorough, so that teachers are willing to regularly use it without exhausting school resources (Lane et al., 2007). A screening measure should also be easily administered, understood, and the results of screening should be able to provide a school with information easily (Glover & Albers, 2007). For pragmatic value, a simple but thorough measure is desirable.

The pragmatic value of a screening instrument and screening system may be gathered through a social validity scale. Social validity asks three main questions: (1) are the goals important to society, (2) are the procedures socially appropriate, and (3) are the effects important socially (Wolfe, 1978). When creating a measure, it seems important to consider how those implementing the procedure view the measure and process. Specifically considering a school system, a screening system should screen an area of concern to a school (important goal). A screening system should also follow a procedure that is not too time intensive (appropriate procedure). Finally, the results of a screening system should be understandable in that schools can help students based on clarity a screening system provides (important effects). By measuring these areas of social validity, it helps ensure the integration of a screening system into a school's regular processes.

Current SEBC Screeners

There are at least four current screeners for SEBC or EBD: the Strength and Difficulties Questionnaire (SDQ), the Student Risk Screening Scale (SRSS), and the Behavior Assessment System for Children, Behavioral and Emotional Screening System (BASC-2 BESS). Additionally there is one screening system, the Systematic Screening for Behavior Disorders (SSBD). Although these screeners were developed to identify students with SEBC or EBD, there

are still concerns regarding the developmental appropriateness of some of these screeners for an adolescent population.

The SDQ (Goodman, 1997) is a 25-item screener that takes approximately 10 minutes per student and can be completed by a teacher, parent, or self-report. It was developed for children and adolescents, covering the age range of 4-16 years. It covers the domains of emotional symptoms (internalizing and externalizing), conduct problems, hyperactivity, peer problems, and prosocial behavior. However, in order to use this as a universal screener, teachers would need to complete the SDQ for each student in their class, which is not realistic.

The SRSS (Drummond, 1994) is a measure that was intended to be used for identifying antisocial behavior for elementary school students grades K-6. This is a no cost, brief 7-question screener, which has high convergent validity with the Strengths and Difficulties Questionnaire (Lane et al., 2007). The concern, however, is that the measure only addresses externalizing behaviors such as lying, stealing, and sneaking and does not represent the internalizing side of EBD.

The SSBD (Walker & Severson, 1992) is a multi-gated measure which uses multiple tests and observations to assess elementary school students (grades K-6) at-risk for EBD. The SSBD is considered by many researchers, the “gold standard” among current EBD screeners (Lane et al., 2009). Completion of the initial gate takes approximately 25-20 minutes to screen all the students in a class. The initial gate, which is a teacher nomination process, is considered a universal screener because the needs of all students are considered in the first gate. Teachers are given several examples of behaviors that are typical for children who tend to have behavioral

concerns in either the externalizing or internalizing category and are then asked to nominate students in their classes who match the behavioral descriptors.

After the teachers have listed the students about whom they have concerns, they are asked to rank the students who have the most concerning behaviors. The SSBD second gate asks teachers to complete two additional forms that address critical behaviors and maladaptive behaviors for the top three students nominated; however, these forms have not been validated for an adolescent population. The third gate, which may be the most difficult for middle or junior high school settings, requires observations of students during class time and recess.

Although the SSBD is a universal screener that covers the construct of EBD, it was developed for an elementary school population, and the behavioral descriptors used for the teacher nomination may not be appropriate for an adolescent population. Behaviors such as biting ones classmates may not be as adequate in describing EBD for an adolescent student.

Although the method of the SSBD is a well-accepted (Lane et al., 2009) means of being a universal screener with multiple gates that access a variety of sources of data, the instrument is exclusively focused on an elementary population. When developing a screener for adolescents, using the SSBD teacher nomination process as a model has advantages because it allows teachers to consider *all* of their students along both dimensions of internalizing and externalizing. Although teachers most often notice externalizing students, the SSBD requires acknowledgement and recognition of the important internalizing behaviors of students who may also be in at risk for future problems.

Another screener that has been recently developed is the Behavior Assessment System for Children, Behavioral and Emotional Screening System (BASC-2 BESS, Kamphaus &

Reynolds, 2007). The BASC-2 BESS is a 25-30 item screener (dependent on the form) developed for use between preschool-12th grade. The BASC-2 BESS was developed as a screening version of the BASC-2 (Reynolds & Kamphaus, 2004). The BASC-2 is a 139-176 question instrument that indicates severity of symptoms related to EBD. Administrators receive information on 11 clinical scales, 5 adaptive scales, as well as an overall level of functioning. The BASC-2 is considered to provide an appropriate assessment and has advantages over other assessment tools (Williams, 2008) and the screener form of the BASC-2 provides a brief but accurate source of information which has been found to be highly related to students' academic, behavioral, and engagement outcomes (Renshaw et al., 2009). The BESS more frequently identifies students as at risk, than compared to teacher referrals (Elkund et al., 2009).

The BASC-2 BESS was developed in 2008, but before the BASC-2 BESS, a preliminary screener, the BASC Teacher Rating Scale-Child Screener (TRS-C Screener, 2007) was developed. The 23 items for the BASC TRS-C Screener were chosen using a principal components analysis of the 142 items in the original BASC, Teacher Report System (BASC-TRS, Reynolds and Kamphaus, 1992). A 6 year longitudinal study was conducted with this screener, and it was found to have high predictive validity. The screener's first year predictive validity of conduct problems (.497), depression (.37), social skills (-.471) (the higher their maladaptive behavior score, the lower their social skills), and atypicality (.479) were all higher than the full BASC's Behavioral Symptoms Index predictive validity (Kamphaus et al., 2007), suggesting the effectiveness of this screener.

After this preliminary screener was developed and evaluated as a reasonable source of data, the development BASC-2 BESS was undertaken with a more thorough process than used in

creating the BASC TRS-C Screener. The BASC TRS-C Screener was developed using only the pool of questions in the original BASC (148 questions). The 27 items used in BASC-2 BESS teacher form were selected from a possible 400 items from the second edition of the BASC, the BASC-2 (Reynolds & Kamphaus, 2004) item pool. In order to select those questions, a four stage analysis was employed. Stage 1 used principal components analysis (PCA) to determine the items that were most strongly associated with the five BASC composite scales: externalizing problems, internalizing problems, school problems, adaptive skills/personal adjustment, and inattention/hyperactivity. Stage 2 used a matrix to place each item in its composite area and the level of influence each item had on the composite scale. Also, it was found that the child and adolescent forms had strong similarities, which led to the development of a single Child/Adolescent form. In stage 3, approximately 30 items were selected for each age group. Finally, stage 4 evaluated differential item functioning (DIF), which allowed test developers to compare gender groups and cultural groups to determine if the items function differently for various groups. Those items were identified in the DIF analysis to function differently for various groups were replaced with items that did have evidence of DIF (Kamphaus & Reynolds, 2007, p 22).

After completion of the four stage process, the end result was the BASC-2 BESS, a short five minute screener that is based heavily upon EBD literature and research. Although the BASC-2 BESS seems an appropriate screener for the adolescent population, with brevity, universality, reliability, and predictive validity, there still is question as to the pragmatic value of this instrument for schools to use as part of a screening process. Although the BASC-2 BESS is brief, (five minutes per child) for a typical secondary school teacher it could possible result in

over 15 hours of effort if the instrument was completed for every student (5 min * 30 students * 6 class periods), making the test unlikely to be completed on a universal level. This does not seem like a normal operating procedure of a middle school making the BESS more likely to be a second gate, rather than a first gate, in a universal screening system.

Current Needs

There currently is a need for a screening measure to be developed for the adolescent students and a need for that measure to identify both internalizing and externalizing behaviors through age-appropriate descriptors. In order to establish validity, a screening measure would need to measure its intended construct, that of EBD behaviors in an adolescent population. This can be shown through comparison with current EBD measures (concurrent validity) and the ability of the screener to detect students in need (predictive validity). The measure should also be reliable, or the results should have consistency across time. It is also equally important to ensure the practicality of a screener in terms of time taken to administer.

This dissertation proposes a process that is universal, brief, age-appropriate, and nationally normed. An adolescent Teacher Nomination Form (TNF) has been developed as a first gate of a universal screening system for adolescent EBD, similar to the SSBD Stage 1. As a second screening gate this study will use the BASC-2 BESS (Kamphaus & Reynolds, 2007). As there are many steps needed to determine the psychometric properties of a given screening system, this study is taking an initial step in gathering such data. This study evaluated this two gate screening process in two ways: the alignment of the first and second gate and the pragmatic value of the process in a secondary setting.