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The Relationship Between Scores from the Student Risk Screening Scale: Internalizing

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Instrument (SEI) in a Sixth-Grade Sample

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A thesis submitted to the faculty of
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Educational Specialist

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ABSTRACT

The Relationship Between Scores from the Student Risk Screening Scale: Internalizing
and Externalizing (SRSS-IE) and Scores from Student Engagement
Instrument (SEI) in a Sixth-Grade Sample

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This study analyzes the relationship between scores from a measure of student engagement and scores from a measure that screens students for being at risk for emotional and behavioral disorders (EBD) in sixth grade students. Screening instruments are used in schools to improve identification of students at risk for behavioral difficulties. Measures of engagement assess students' levels of psychological and cognitive engagement in school. Students in this study completed the Student Engagement Instrument (SEI), an instrument used for measuring student engagement. Teachers completed the Student Risk Screening Scale-Internalizing and Externalizing (SRSS-IE) for their students, which screens for risk of EBD. Results indicate there was not a significant relationship between SEI scores and SRSS-IE scores. However, there were significant correlations between the SEI scores of psychological and cognitive engagement ($r = .709$, $p < .01$). Additionally, the relationship between the internalizing and externalizing scores of the SRSS-IE were also significant ($r = .291$, $p < .05$). Implications, limitations, and ideas for further research are explored.

ACKNOWLEDGEMENTS

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Chapter 1: Introduction

Student engagement and emotional and behavioral disorders (EBD) are two areas of research that are garnering practical interest among educators; and researchers are interested in effective and efficient ways of identifying youth who are at risk for social, emotional, and behavioral difficulties. Typically, these constructs (i.e., engagement and EBD risk) have been studied in isolation. Although both constructs have been studied, the relationship between engagement and EBD have had limited attention in the research literature. This study will examine the relationship between student engagement and EBD risk in the sixth grade school setting.

Engagement, the relationship of the student with the school, peers, teachers, adults, and curriculum (Yazzie-Mintz, 2009; Yazzie-Mintz & McCormick, 2012), has been considered a primary factor that influences student dropout (Finn, 1989) and high school completion (Furlong & Christenson, 2008). Engagement is a multidimensional construct composed of different subtypes (Saeki, 2012), and there are differences in the number of subtypes, models, and dimensions. Engagement is composed of external and internal components, which includes the student's feelings, beliefs, thoughts, and behaviors in the school context (Saeki, 2012).

EBDs are described as undesirable, sustained patterns of socially inappropriate behaviors (Lane, Parks, Kalberg, & Carter, 2007; Walker, Ramsey, Gresham, & 2004). EBD can be labeled into categories of externalizing and internalizing behaviors. Aggression, antisocial behaviors, fighting, and high activity levels are considered externalizing behaviors while anxiety, stress, shyness, somatic complaints, and withdrawal are behaviors of internalizing nature. Externalizing behaviors are more easily recognized due to the nature of their behaviors being directed more outwardly and disrupting classrooms. Internalizing behaviors tend to be less

noticed as the behavior is directed inwardly (Lane, Oakes, et al., 2012). Understanding the relationship between EBD and engagement may improve identification of students at risk for social, academic, behavioral, and emotional difficulties and help educators target interventions to specific student needs.

EBD Screening

Teachers are often the referral source in EBD identification of students, linking students with access to school services (Eklund et al., 2009) and providing the majority of special education referrals (Lloyd, Kauffman, Landrum, & Roe, 1991). However, this individualized referral process presents some difficulties. Some teachers may believe it is someone else's responsibility to identify and respond to youth who are at risk for EBD (Severson, Walker, Hope-Doolittle, Kratochwill, & Gresham, 2007), others may not refer behavioral problems at the same rate as academic problems (Walker, Nishioka, Zeller, Severson, & Feil, 2000). Although teachers are a major source of referrals, additional systematic methods, such as school-wide screening measures completed by teachers, may improve identification of students with EBD or students at risk of EBD. However, a student-completed survey may enlighten and improve identification of students (Appleton, Christenson, Kim, & Reschly, 2006; Hazel, Vaziribadi, Albanes, & Gallagher, 2014), especially with internalizing behaviors that are not easily observed by teachers (Appleton et al., 2006).

Purpose of Research

This research will explore the relationship between student scores on a measure of engagement and a score that indicates risk of EBD. While there are some similarities between EBD and student engagement, the similarities have not been fully explored in the research literature. For this study, sixth grade teachers completed a screening tool, the Student Risk

Screening Scale-Internalizing and Externalizing (SRSS-IE) (Lane, Oakes, et al., 2012), which identifies students at risk for EBD. Students completed a self-survey, the Student Engagement Instrument (SEI) (Appleton et al., 2006). Using a two by two matrix correlational analysis, the relationship between the two constructs will be determined.

Chapter 2: Literature Review

Identifying At-Risk Students in Schools

A Multi-Tiered System of Support (MTSS) is an evidence-based model that involves screening to identify all students who may have academic and behavioral difficulties (Appelbaum, 2009; Gamme et al., 2012). Designed to prevent long-term academic and behavioral failures, early intervention is emphasized to meet the needs of at-risk students (Appelbaum, 2009). This model helps schools ensure that resources reach the needed students with the appropriate intensity of intervention to improve performance of all students (Gamme et al., 2012).

The framework of the MTSS is composed of three tiers. Tier 1 involves general academic and behavioral instruction in the general education instructional setting for all students. Tier 2 is more focused and incorporates interventions and additional supports for some students with academic and/or behavioral needs, typically on a short-term basis to address a specific skill deficit. Tier 3 incorporates the most intense individualized instruction and intervention for a few students and their needs (Gamme et al., 2012).

Screening is a critical component of the MTSS framework to identify students who have varying needs that require different intensities or tiers of interventions (Glover & Albers, 2007). Universal screening involves considering all students in a school and determining which students may need short-term, targeted interventions and which students may need intense, individual interventions. Historically, students have not received services or support until they have sufficiently failed and have been referred for special education services (Applebaum, 2009). The tiered-approach to intervention facilitates evidence-based practices by identifying individuals

and responding to their needs (Eklund et al., 2009). Screening allows educators to understand the appropriate tier of services to be offered in order to better help the student.

Universal screening measures may be used in schools to identify students at risk of academic failure, dropout, behavioral difficulties or other challenges to help provide administrators and teachers with tools to help determine which students may need additional support through tiered interventions of the MTSS model (Eklund et al., 2009; Menzies & Lane, 2012). Emerging evidence has shown that early identification, along with comprehensive prevention strategies and interventions, decreases the chance of future life difficulties for a student (Eklund et al., 2009; Lane & Menzies, 2003). Furthermore, early identification prevents negative outcomes (Appleton et al., 2006). Understanding the variables that predict poor academic, social, and behavioral outcomes is essential to provide optimal services for students at risk for poor outcomes (Montague, Enders, & Castro, 2005). Thus, considering a variety of measures to include in the screening process could increase the accuracy of identifying at-risk students.

Student Engagement

Engagement is a multi-dimensional construct with varying definitions; it is generally understood as the relationship between the school community, students, adults, peers, and curriculum (Yazzie-Mintz, 2009; Yazzie-Mintz & McCormick, 2012). Some consider engagement as a process (Darr, 2012) and others have conceptualized engagement as an outcome (Appleton, et al., 2006; Darr, 2012; Skinner, Furrer, Marchand, & Kiderman, 2008). While consistently being influenced by external factors, such as the school, family peers, and expectations, (Darr, 2012; Reschly & Christenson, 2006a, 2006b) internal factors also contribute to the engagement of the student, such as depression, anxiety, and fears. Engagement of the

student in schoolwork is often perceived as a behavioral or psychological issue with the individual student responsible for personal engagement (Fredricks, 2004). Engagement includes both internal and external components which affect student's success, relationships with others, and dropout. Students who are engaged are typically paying attention and participating in class; feeling cared for and respected, displaying positive student behaviors (such as attendance), and are part of the school environment (Anderson, Christenson, Sinclair, & Lehr, 2004).

Current research indicates that engagement is composed of different components, or subtypes, (Yazzie-Mintz & McCormick, 2012) and is multidimensional (Appleton, Christenson, Furlong, 2008; Darr, 2012). Differing models vary in the number of subtypes, generally between two, three, or four-components (Darr, 2012). Typically, engagement has been known for its relationship with dropping out of school (Finn, 1989). Past research has been directed towards external types of engagement due to the easy availability of student records such as grades, observable behaviors, or attendance. The internal components of engagement (i.e., psychological/affective and cognitive engagement) have been included in a measure of engagement (Appleton et al., 2006) and may be related to some aspects of internalizing characteristics of being at risk for EBD.

Different models of student engagement. There are different models and varying subtypes of engagement. Finn (1989), Newmann, Wehlage, and Lamborn (1992) incorporated two main components of engagement. These two components consist of behavioral and affective engagement (Saeki, 2012). Others, such as Fredericks, Blumenfield, and Paris (2004), and Jimerson, Campos, and Greif (2003) use a 3-subtype model, with the additional component of cognitive engagement. Christensen and Thurlow (2004) define engagement using four components; another model, named Check & Connect (University of Minnesota, 2013) uses four

subtypes: academic, cognitive, behavioral, and psychological (Appleton et. al, 2006). Additionally, some studies interchange 'affective' for 'psychological' (Appleton et al., 2008).

Reschly and Christenson (2006) use a four-component model (academic, behavioral, cognitive, psychological/affective engagement) consisting of observable and internal factors. Behavioral and academic engagements are more observable indicators, while psychological and cognitive are less observable and more internal in nature (Christenson & Thurlow, 2004). Others easily see observable engagement, (i.e., participation in class) but internal engagement (i.e., how a student feels inside) requires self-report to assess (Hazel et al., 2014). Academic engagement is considered as time on task, homework completion, and grades. Behavioral engagement is determined by attendance, voluntary classroom participation, and extra-credit options. Psychological, or affective, engagement is determined by the student's sense of belonging and identification with the school. Cognitive engagement is the student's value of learning, ability to set goals and strategize, and self-regulation abilities (Hazel et al., 2014).

Student engagement in schools. Some researchers have argued that despite these conceptual differences of the number of components of engagement, there is a strong empirical relationship between engagement and academic achievement, social, and emotional learning (Appleton et al., 2008; Furrer & Skinner, 2003; Klem & Connell, 2004). Students who are highly engaged tend to have higher grades, better test scores, and have decreased dropout and suspension rates than students who are marginally engaged (Appleton et al., 2008; Spanjers, 2007).

Students tend to become less engaged in schools as they advance from elementary to middle school, and from middle school to high school (Klem & Connell, 2004). Regardless of urban, suburban, or rural school settings, as many as 40 to 60% of high school students become

disengaged (Klem & Connell, 2004). Evidence shows that engagement declines through the upper-elementary grades, middle school; and high schools often have the lowest levels of engagement (Fredericks et al., 2011). In a study by Furlong and Christenson (2008) students self-reported being less engaged during high school years, and approximately 25% of students were not engaged. Students were more at risk of expressing lower engagement if they had a history of lower socioeconomic levels, and/or received special education services (Furlong & Christenson, 2008).

Emotional and Behavioral Disorders

Emotional and behavioral disorders (EBD) are described as undesirable, sustained patterns of socially inappropriate behaviors (Lane, Parks, et al., 2007; Walker, Ramsey, Gresham, 2004). EBD is sorted into two main types of behaviors: externalizing and internalizing. Externalizing behaviors include antisocial behavior, fighting, high activity levels, and/or aggression. Internalizing behaviors consist of anxiety, shyness, withdrawal, hypersensitivity, and physical complaints (Lane, Menzies, et al., 2012). Both externalizing and internalizing behaviors contribute to difficulties in social, academic, and behavioral difficulties for students (Lane, Little, Redding-Rhodes, Phillips, & Welsh, 2007).

Students may develop behavioral concerns at a variety of times in their school careers. Generally, those who develop EBD earlier in life, in the pre-elementary or elementary years, are considered early starters, while those who develop EBD in middle school or later are considered late starters (Lane, Parks, Kalberg, & Carter, 2007). One report showed that between 2% and 20% of youth has some form of EBD (Kauffman & Brigham, 2009; Lane, Oakes, et al., 2012). A study approximated that 10% to 15% are considered at risk for developing behavioral and/or academic problems (Walker, Cheney, Stage, Blum, & Horner, 2005). Thus, it is important to

screen at various developmental stages in order to improve identification earlier and implement interventions sooner.

Externalizing behaviors. Students with externalizing, or under-controlled behaviors, tend to be the focus of interventions more frequently than those with internalizing behaviors (Lane, Menzies, et al., 2012). Externalizing behaviors consist of physical or verbal aggression, fighting, or other outward-directed behaviors, which catch the teachers' attention and disrupt instruction (Lane, Menzies, et al., 2012). Research has revealed that students with externalizing problems receive more services from schools rather than those with internalizing problems (Bradshaw, Buckley, & Ialongo, 2008; Cook et al., 2011). If effective interventions are not implemented with students with EBD, they have an elevated risk for academic failure, delinquency, substance abuse, and peer rejection (Reinke, Herman, Petras, & Ialongo, 2008).

Internalizing behaviors. Internalizing behaviors can also affect students and their success in schools. Due to the nature of behaviors directed inward, internalizing behaviors, such as anxiety, withdrawal, and/or depression, are often recognized less often, and students with internalizing concerns tend to receive less services or support than students with externalizing concerns (Cook et al., 2011; Lane, Menzies, et al., 2012). Additionally, many students are at risk for internalizing difficulties and are often not identified (Cook et al., 2011). Kessler, Berglund, Demler, Jin, and Walker (2005) indicated that 46.6% of the population will experience a mental health disorder, and the about half of all disorders begin by age 14. If left untreated, students with internalizing behaviors have an increased risk of poor academic performance, poor physical health, an increased risk of alcohol and/or substance abuse, and future unemployment (Cook et al., 2011).

Negative outcomes for students with EBD. Among students with or without disabilities, those with emotional disorders experience less school success than any other group of students (Landrum, Tankersley, & Kauffman, 2003; Lane et al., 2007). Students with EBD earn lower grades, have difficulties in math and reading expression, and have higher rates of course failure than any other group (Bullis & Yovanoff, 2006). A national longitudinal study reported that of those students with EBD, half of them dropped out of school, 75% received below expected grade levels in reading, and 97% received below expected grade levels in math (Bradley, Doolittle, & Bartolotta, 2008; Eklund et al., 2009).

In addition to experiencing academic difficulties, youth with EBD may struggle socially and behaviorally. Anti-social behaviors, limited social skills, anxiety, and/or depression contribute to difficulties with relationships and ineffective interactions with other students and teachers (Lane, Menzies, et al., 2012). Problems are heightened for children with behavioral problems. Students with EBD have an increased risk of rejection, substance abuse, delinquency, and dropout (Eklund et al., 2009). The U.S. Department of Education (2002) reported that of the students with EBD, 51% dropped out of school while 42% graduated with a general diploma (Lane et al., 2007). Life is challenging for students with EBD, particularly when it is detected later, if at all (Lane, Menzies, et al., 2012).

Screening in Schools

Screening helps identify students at risk of negative outcomes, as well as target student needs so that interventions can be implemented (Young, Caldarella, Richardson, & Young, 2011). Early and comprehensive prevention and intervention has demonstrated a decrease in academic failure and future life difficulties (Eklund et al., 2011; Lane & Menzies, 2003). A screening instrument is effective when it can be used to develop a continuum of services and has

the ability to screen all students, not only those with significant problems and difficulties (Eklund et al., 2011; Glover & Albers, 2007). Screening efforts should identify general education students who demonstrate may demonstrate a few risk factors and those who show many. Screening identifies students who may not have all the symptoms of a disorder, requires less time than assessment, and focuses on a broad range of concerns and symptoms (Young et al., 2011).

Screening Instruments

Effective screeners have specific core features that accurately identify students at risk (Appleton et al., 2006; Lane et al., 2009). It is necessary to have a pragmatic instrument that has evidence of validity and produces reliable scores (Menzies & Lane, 2012). Essential characteristics of sound psychometric screeners include: high internal consistency (Cronbach's value of .80 or higher), high test-retest stability (high correlations between scores), convergent validity, positive predictive power (PPP; the probability that the score selected is a member of the target group), and sensitivity to the population being targeted (Appleton et al., 2006; Lane et al., 2007; Menzies & Lane, 2012). Although an instrument may be psychometrically sound, the chances of it being administered properly is decreased if it is not feasible, too lengthy, time-consuming or if it is too difficult to interpret, score, or prepare (Lane, Bruhn, Eisner, & Kalberg, 2010). The ideal screener has evidence of social validity. Social validity is established when an instrument is practical in its time requirement for administration, scoring, and interpretation in respect to the resources available such as time, personnel, etc. (Appleton et al., 2006).

Screening and engagement. With a variety of definitions pertaining to student engagement, the tool selected to measure engagement should be congruent with research and intervention purposes. Although some engagement subtypes include more observable behaviors

than other instruments, less observable engagement subtypes factor into student achievement, as well. Strong measures of engagement capture both internal and external characteristics of engagement. The measure needs to have strong psychometric properties and evidence of social validity (Appleton et al., 2006; Betts, Appleton, Reschly, Christenson, & Huebner, 2010; Darr, 2012; Fredricks et al., 2011).

Appleton (2006) developed an instrument for measuring engagement titled the *Student Engagement Instrument* (SEI), which purports to measure engagement as a multi-dimensional construct (National Center for Student Engagement (NCSE), 2006) with four subtypes, including: academic, behavioral, cognitive, and psychological. This instrument was designed to measure the psychological and cognitive aspects of engagement (Fredericks et al., 2011). The SEI is a 35-item self-survey which takes approximately 15 minutes for students to complete.

The results from Betts and colleagues (2010) study showed that the SEI was an instrument with the potential to be used in general school practice for prevention in identifying students at risk of disengagement from school, which often leads to academic failure and dropout. The SEI was validated using 1,940 ninth graders (Appleton et al., 2006). It was later evaluated across grades 6 through 12 by gender (Hazel et al., 2014). Research has shown that academic indicators, such as GPA, reading and math scores had positive relationships with SEI scores (Appleton, et al., 2006). Negative relationships were shown between school suspension and SEI factors (Appleton, et al., 2006). Furthermore, results from this study promoted the SEI instrument as capably measuring the subtypes of cognitive and affective engagement in both middle (grades 6-8) and high school (grades 9-12).

Screening EBD. Universal screening is used to identify those at risk of academic failure and/or behavioral problems. All students, not just those with profound difficulties, are screened

to identify a variety of concerns, which may present future problems or difficulties currently being experienced (Glover & Albers, 2007). The screener used should be appropriate for its context and purpose. Glover & Albers (2007) suggest that the screener is compatible with the local service delivery needs, aligns with interest, is supported both theoretically and empirically, and fits the population.

There are a variety of screening instruments used to screen for EBD; the SRSS-IE will be used for this study. It is a universal screener completed by the teachers, aligns with their interest of helping children, is supported theoretically and empirically, and fits the 6th grade sample that was available for data collection. The *Student Risk Screening Scale-Internalizing and Externalizing* (SRSS-IE) is a modified version by Lane and Menzies of the Student Risk Screening Survey (SRSS) (Drummond, 1994). The SRSS is composed of 7 items to detect antisocial behavior. The initial SRSS-IE, added 7 additional items to the SRSS, for a total of 14 items (SRSS-IE14) to detect antisocial behaviors (Lane, Menzies, et al., 2012). However, after the initial pilot study, only 5 of the 7 newer items that addressed internalizing behaviors were kept (SRSS-IE12). These items consist of (a) emotionally flat, (b) shy, with-drawn, (c) sad, depressed (d) anxious, and (e) lonely (Lane, Menzies, et al., 2012). These modifications have improved the chances of finding individuals with internalizing behaviors (Lane, Oakes, et al., 2012).

The SRSS-IE is a no-cost screening tool in which teachers rate students, using a 4-point Likert scale, to identify elementary students at risk for antisocial and internalizing behavior patterns. It requires 15 minutes per class to complete on an excel sheet. Higher scores correlate with higher levels of behavioral concerns. Furthermore, Lane and colleagues (Lane, Parks, et al., 2007) recognized it as socially valid (Lane, Little, Redding-Rhodes, Philips, & Welsh, 2007),

technically sound, and also as a psychometrically sound instrument for primary and secondary-age students (Cook et al., 2011).

Purpose of the Study

The purpose of this study is to determine the correlation between scores on a measure of student engagement and scores from a measure of risk for emotional and behavioral disorders (EBD) using the SRSS-IE. Many factors and consequences of students with EBD and those with disengagement propensities are very similar. In this study, the following question will be addressed: How does student engagement, as measured by the SEI, predict student risk status as indicated by a teacher-completed screening measure (SRSS-IE)?

Hypothesis

It is predicted that student scores on a measure of engagement (SEI) and scores from a measure of EBD will not be significantly correlated. Understanding how or if these scores are related is the purpose of the study, which can assist researchers and educators determine how to effectively screen and identify students who may have internalizing or externalizing behavioral concerns. The specific hypothesis correlating with the research questions is as follows: It is predicted that the correlation of the engagement scores will have no relationship with the SRSS-IE scores.

Chapter 3: Method

This section describes the research method, participants, setting, and instruments used in this study. A correlational analysis, using a 4x4 matrix, was used to summarize the relationship between self-reported scores using the SEI, and teacher-reported scores, using the SRSS-IE.

Participants

Sixth grade teachers were asked to complete the SRSS-IE during May 2014 for a collaborative research project intended to identify students who may be at risk for EBD and who had low school engagement. A collaborative research relationship that mutually benefited the school and the researcher had been developed over time, and the teachers agreed to support this research project as the data would be mutually beneficial: teachers would have specific information about their students to make data-based decisions, and data would be available for research purposes. The screening was completed as typical educational practices, and then the students were then recruited to participate in the research and asked to complete the SEI. The students were given parent consent and student assent forms to be signed and returned to the school. Approximately 105 students were invited to participate in this study. Of which, 66 had parent consent and child assent forms to facilitate student completion of the SEI. Of the 66 that had parent consent 59 students had completed SEI and SRSS-IE scores.

Setting

This study took place in an elementary school located in the western United States. The demographics of the school consist of 90.8% Caucasian, 4.3% Hispanic/Latino, 2.3% English Language Learners, 1.2% African American/Black. About 27.9%, approximately 205 students, were eligible for free/reduced lunch status. The average classroom size consisted of one teacher and 27 students.

Measures

      Student Engagement Instrument (SEI). For the purposes of this study, the SEI was used to measure student engagement. The SEI is a survey used to measure self-perceived cognitive and affective/psychological engagement (Appleton et al, 2006). The pilot study of the SEI demonstrated internal consistency estimates from α= .72-.88 (Appleton et al., 2006). Additionally, the SEI is a six-factor structure (Student-Teacher relationships, Peer Support for Learning, Family Support for Learning, Peer Support for Learning, and Extrinsic Motivation) which correlates as expected with academic variables, with the extrinsic component relationship slightly lower than the other SEI factors (Appleton et al., 2006).   Betts et al., (2010) also contributed findings that the SEI has good internal consistency α= .70-.80 and factorial invariance of the SEI's factors for grades six through twelve. Lovelace, Reschley, Appleton, and Lutz (2014) also did a study of the SEI, but with the focus on predictive and criterion validity of the SEI. Their results supported the criterion validity of the SEI that different engagement levels were associated with educational outcomes. Results indicated that the SEI predicted dropout and on-time graduation; thus, supporting the measure's predictive validity (Lovelace et al., 2014).

      Student Risk Screening Scale-Internalizing and Externalizing (SRSS-IE). The SRSS-IE is a modified version of the SRSS by Drummond (1994). The SRSS-IE kept the original 7 items (SRSS-E7), and added 5 more items to make a 12-item screener (SRSS-IE12) to include characteristics of students with internalizing behavior patterns (Lane, Menzies, et al., 2012). The first 7 items, (the original SRSS (SRSS-E7), which screen for externalizing behaviors, have a strong internal consistency (.84). The additional 5 items, which detect internalizing behaviors, has an adequate internal consistency of .72 (Lane, Menzies, et al., 2012).

At the elementary level, for which the SRSS-IE was originally designed, (Drummond, Eddy, & Reid, 1998), the SRSS-IE is socially valid (Lane et al., 2008; Lane et al., 2010; Lane, Menzies, et al., 2012) and psychometrically sound (Lane et al., 2009; Lane, Menzies, et al., 2012). When compared with an established behavior screening tool, the Strengths and Difficulties Questionnaire (SDQ), the SRSS-IE12 improved chances of finding internalizing behaviors by 32% (AUC= .818). Additionally, when compared with another established behavior screening tool, the Systematic Screening for Behavioral Disorders (SSBD), the SRSS-IE12 improved chances of finding externalizing behaviors by 42% (AUC= .921) (Lane, Menzies, et al., 2012). These findings provide evidence of validity of the instrument in identifying students with internalizing and externalizing behaviors (Lane, Menzies, et al., 2012).

Procedure

Administration of the SEI. Teachers presented a script describing the SEI and distributed consent forms to be signed by their parent/guardian and returned. A cover letter was also given with the consent form explaining the study. Extra copies of the consent form were given to the teachers in case any forms were lost. Approximately three days after the first explanation, extra copies of the consent forms and cover letters were used to provide other opportunities for students to participate in the study. Students were also asked to give assent. After obtaining consent forms and obtaining student assent, the Student Engagement Instrument (SEI) was administered to the students. Students who did not participate were asked to read quietly or complete a word-search puzzle. Appendix A contains a copy of the consent forms, and Appendix B contains both the SRSS-IE and the SEI.

Administration of the SRSS-IE. As part of a school-wide screening process and standard educational practice, sixth grade classroom teachers completed the SRSS-IE. This

survey takes approximately 15 minutes for teachers to complete per class. Teachers entered data on an Excel sheet of their class and rated their students on 12 different items using a 4-point Likert-like scale ranging from 0-3.

Research Design

In order to determine the relationship between the engagement and EBD risk, a correlational analysis was used to determine, compare, and predict scores from the SRSS-IE and SEI. A 4x4 matrix was used to illustrate the relationships among the SEI and SRSS-IE scores. The two components of the SEI instrument (cognitive and affective engagement) were correlated with the internalizing and externalizing categories of the SSRS-IE and with each other.

Chapter 4: Results

Pearson correlation coefficients were calculated to determine the relationship between the

following scores: SEI cognitive, SEI psychological engagement, SRSS-IE internalizing, and

SRSS-IE externalizing. SEI cognitive and SEI psychological scores had a significant correlation

($r = .709$, $p < .01$). Externalizing and internalizing SRSS-IE scores had a significant correlation

($r = .291$, $p < .05$). No significant correlations were found between any SEI scores and SRSS-IE

scores. Table 1 contains the r-values for this correlation matrix.

Table 1

Correlations Between SEI Scores and SRSS-IE Scores

Measure	Psych. Enga	Cogn. Enga	Ext. Risk	Int. Risk
Psych. Enga	---	.709**	-.046	.195
Cogn. Enga	.709**	---	-.112	.157
Ext. Risk	-.046	-.112	---	.291*
Int. Risk	.195	.157	.291*	---

*$p < .05$.
**$p < .01$.

Table 2

Engagement and SEI Subtype Score Analysis Results

Measure	Psych. Enga	Cogn. Enga	Ext. Risk	Int. Risk
Mean	3.39	3.51	2.75	1.97
Median	3.40	3.51	2.00	1.00
Standard Deviation	.39	.32	3.10	2.62
Range	2.47-3.96	2.68-3.94	0.00-14.00	0.00-12.00
Number (N)	59	59	59	59

Chapter 5: Discussion

Student engagement and EBD screening have been studied in isolation, with little research exploring the relationship between the constructs. While there appear to be similarities between EBD and student disengagement (e.g., poor student outcomes, low academic skills; Eklund et al., 2009) the similarities have not been fully explored in the research literature. Results from this study demonstrated that there was not a significant relationship between student engagement scores and teacher-perceived conclusions about students' risk of EBD in this sample of sixth grade students.

 These results are consistent with Kegan's constructive-developmental theory (Kegan, 1982). In *The Evolving Self*, Kegan describes that the way to understand someone is to how the person is developmentally moving through a variety of developmental tasks. These stages or tasks do not develop in isolation. For example, an individual does not develop socially and cognitively in isolation, but rather, cognitive development contributes to social development and social development fosters cognitive development. Development, according to Kegan, happens holistically and youth are best understood from a broader perspective rather than a single component. Similarly, the results of this study support Kegan's theory, independently considering engagement and EBD risk lead to definitive conclusions.

A correlational 4x4 matrix was used in consideration of the relationship between the SEI scores and SRSS-IE scores. Although there was not a significant correlational relationship between the scores from the SRSS-IE and the SEI, there was a significant relationship between the SEI subtests scores: psychological engagement and cognitive engagement. Additionally, the internalizing and externalizing risk categories of SRSS-IE also had a significant relationship.

This correlational study supports previous research that explored the relationship between subtests on these measures of engagement (Darr, 2012). The cognitive and psychological engagement scores of students in this sample were significantly correlated—reemphasizing the idea that engagement subtypes over-lap and share common elements of the engagement construct.

The outcomes for youth with limited engagement who tend to have higher drop-out rates, lower attendance, decreased academic achievement (Anderson et al., 2004; Appleton et al., 2008; Furrer & Skinner, 2003; Klem & Connell, 2004) and the outcomes for youth who are at risk for social, emotional, and behavioral problems are quite similar (e.g., academic failure, peer rejection, and antisocial behaviors (Menzies & Lane, 2011; Reinke et al., 2008). Intuitively, it seems reasonable that a relationship would be evident between measures of these constructs. Although there are similar outcomes in the two constructs, it is likely that there may be differences in the process of reaching these outcomes, which is a question beyond the scope of this research.

Engagement and Student Risk

There may be a variety of reasons why the students' engagement scores were not correlated with the teachers' ratings of student risk. It was assumed that students' low engagement scores could be due to at-risk behaviors or social-emotional struggles; however, there may be many contextual factors that contribute to low engagement scores that were not included in this study, such as differences between student and teacher perceptions, how one defines engagement and self-awareness. These contextual factors affect student academic achievement and school success (Yazzie-Mintz, 2010). Students lacking in relationships at

school, home, or peers are more likely to be disengaged, which often leads to lower attendance (Anderson, Christenson, Sinclair, & Lehr, 2004) and drop-out (Yazzie-Mintz, 2009).

For students with low engagement scores, it seems reasonable to assume that these students would also have difficulties with social situations, behavioral management, or emotional regulation difficulties, which are characteristics of students at risk for EBD. However, the path to low engagement may have little to do with social, emotional, and behavioral difficulties and more to do with schools creating a warm, inviting, and safe learning environment. Many SEI questions focus on relationships of trust and warmth (e.g., teachers care about students, adults and students listen to me) and internal states of the student (e.g., other students at school care about me, or the rules are fair).

The low correlations may have been influenced by students' limited self-awareness, which is developmentally appropriate, and difficulty with teachers scoring students' internalizing behaviors. A limitation in self-report measures is that the individual may be subject to answer in socially desirable ways (Anderson et al., 2004). Students may have perceived that they were engaged when they actually had limited engagement; and this may have been especially applicable for students with externalizing behavioral concerns.

Limitations

This homogenous sample of students and teachers from the same school limits the generalization of these results. This data collection occurred at the end of the school year; thus, it is a sample of behavior at one moment and influenced by the atmosphere of the last weeks of school. Multiple screenings may improve identifying children as disengaged or at-risk. Another limitation in the study is determining if the lack of significant correlation between constructs

may be due to the differences sources of data, i.e., teachers completed SRSS-IE and students completed SEI.

Few children in this sample scored in the at-risk range of the SRSS-IE or had scores that indicated they were disengaged. The limited score range may contribute to an underestimation of the correlation coefficient. The results of the cognitive and psychological engagement scores were only found at risk in 6.8% and 16.9% of the participants, respectively. Additionally, 3.4% of the students were at-risk for externalizing concerns and 22% for internalizing concerns using the SRSS-IE. Overall, only 3% were at-risk in at least one category on the SRSS-IE and one category on the SEI. Another consideration is the number of participants that returned consent to complete the engagement instrument (e.g., students who returned the consent form may have been more likely to be conscientious students that were inclined to respond in socially desirable ways). Or the teachers may have had exceptional teaching skills that fostered high engagement scores from their students. All of the students were included in the SRSS-IE because it is standard educational process to screen all students; however, only 53% of potential student participants returned consent forms to facilitate their completing of the SEI. Thus, broadening the sample so that a wider range of scores was included may lead to different conclusions about the relationship between SRSS-IE and SEI scores.

Implications for Future Research

Future research could focus on including both student and teacher completed measures of student risk for EBD and student engagement. Although the correlational results were not significant between the two constructs, it may be due to differences in teacher and student perceptions or a limited sample.

Although there were no significant correlational findings in this study, multiple screenings throughout the school year may improve identification of children at-risk of EBD and low engagement. Further research could clarify if there are trends throughout the school year where engagement or EBD demonstrate more at-risk tendencies. A longitudinal study may also help clarify delayed effects e.g., a student considered disengaged one month predicting increased SSRS-IE scores the following month, or vice versa.

Implications for Practitioners

When measures of student engagement are completed in schools, educators should be cautious in considering the possibility that a student with low self-reported engagement scores may also be a student at risk for social-emotional concerns. And similarly, when screening results indicate that a student is at risk for social-emotional concerns, students might still report being engaged in the educational process. Assessing students' engagement and level of EBD risk with both types of instruments may help to identify students' needs and plan for appropriate supports and interventions.

Conclusion

This study examined the relationship between engagement and risk of emotional behavioral disorders (EBD) in sixth grade students in elementary school. The engagement scale, SEI, was completed via self-survey while EBD was measured using the SRSS-IE, a teacher-completed instrument. Data was analyzed using a 2-tailed test in a 4x4 matrix correlating two components of engagement (psychological and cognitive) with two components of EBD (internalizing and externalizing).

Past research has focused on engagement and EBD separately. This research demonstrated that there was not a significant relationship between the self-reported SEI scores,

and the teacher completed, SRSS-IE. However, there was a significant correlation between

cognitive and psychological engagement, both subtests of the SEI. Additionally, internalizing

and externalizing behaviors had a significant correlation, both measures of the SRSS-IE. This

finding is not surprising as it is typical for subtests scores within an instrument to be significantly

related.

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APPENDIX A: Parent and Student Consent Forms

Parent and Student Consent Form

Consent to be a Research Participant

Introduction

This research study is being conducted by Ellie L. Young, PhD, a professor at Brigham Young University to understand how student engagement influences if students are at-risk. You were invited to participate because you are a sixth grade student at Grovecrest Elementary School.

Procedures

Students will be asked to complete the following surveys during advisory time in both February and May:

Student Engagement Instrument, which will take approximately 20 minutes.

In addition, student information about grades, attendance, and office discipline referrals will be available to the researchers. No student names will be connected with this data. The school will only release this data using student ID numbers. Researchers will not have a way to connect student names with ID numbers.

If you agree that your child can participate in this research study, the following will occur:

Your student will complete the survey at school, which will take approximately 20 minutes. If you choose not to have your child participate, he or she may complete a word search puzzle or read quietly while other students complete the Student Engagement Instrument.

Risks/Discomforts

There are minimal risks for participation in this study. Your student may feel some mild discomfort when completing forms about their school experiences.

Benefits

There will be no direct benefits to you. It is hoped, however, that through your participation researchers may learn about how student engagement is related to student risk status.

Confidentiality

The research data will be kept in a locked filing cabinet in the researcher's office at BYU or on a password protected computer and only the researcher will have access to the data. At the conclusion of the study, all identifying information will be removed and the data will be kept in the researcher's locked cabinet for approximately 3 years. Only the researchers involved with the study will have access to the data, which will be kept in locked filing cabinets in the researchers office.

No student or parent will be identified in any publications or presentations that result from the survey. The name of the school or the school district will not be used in any public sharing of the data.

Compensation

Students who return this signed consent form will be given a small gift such as a pencil or eraser. Even if the parent/guardian does not want the student to participate, if the form is signed, the child will be given a pencil or eraser.

Parent and Student Consent Form

Will anyone know I am in the study?

We won't tell anyone you took part in this study. When we are done with the study, we will write a report about what we learned. We won't use your name in the report.

What happens if I get hurt?

Your parents have been given information about what to do if something negative happens if you choose to participate.

What if I do not want to do this?

You don't have to be in this study. It's up to you. If you say yes now, but change your mind later, that's okay too. All you have to do is tell us.

Before you say yes to be in this study; be sure to ask Ellie Young to tell you more about anything that you don't understand.

If you want to be in this study, please sign and print your name.

Name (Printed): _____ Signature_____ Date: _____

APPENDIX B: Instruments Used in Research

Student Risk Screening Scale-Internalizing and Externalizing (SRSS-IE)

Directions:

Consider the following students' behavior over the last two months. Please mark every item. If you don't know or are unsure of your response to an item, give your best approximation. If there is a student on the list who is not in your classroom, mark an X on each behavior for that student. If there is a student in your class who is not on the list, type their name in the first empty row and then rate their behavior. Please mark every item. If you don't know or are unsure of your response to an item, give your best approximation. If there is a student on the list who is not in your classroom, mark an X on each behavior for that student. If there is a student in your class who is not on the list, type their name in the first empty row and then rate their behavior.

Teacher _____   Grade _____

Student Name _____   Student ID _____

0=Never, 1=Rarely, 2=Occasionally, 3=Frequently

Externalizing
1. Stealing
2. Lying, Cheating, Sneaking
3. Behavior Problems
4. Peer Rejection
5. Negative Attitude
6. Aggressive Behaviors
7. Low Academic Achievement

Internalizing
8. Emotionally Flat
9. Shy, Withdrawn
10. Sad, Depressed
11. Anxious
12. Lonely

Student Engagement Instrument

Administration Standardization Procedures ..
What to Say to Students:

1) "Today we have a questionnaire to learn about your experiences while attending this school. Your responses will be confidential. Your honest answers will be used to help me and the school serve you and other students better."

2) "Do not begin marking answers until we discuss the directions and I begin to read the questionnaire items aloud."

3) "First, use a pencil to fill in your name and today's date at the top of the questionnaire."

4) "For the questionnaire items you will be choosing how much you agree with the statement by selecting from □ 'strongly agree,' 'agree,' disagree,' or 'strongly disagree.'

5) "For each item mark only one answer with a checkmark. If you make a mistake or change your mind, erase □ your old answer entirely and fill in your new answer."

6) "I'll be reading the items so that I can respond to any questions you might have right away."

7) "If you have any questions about the items I'm reading or if you need a bit more time with an item, be sure to □ let me know." *[Read items as directed in the 'Administration Procedures.']*

8) "Thank you for your time and opinions."

Administration Procedures:
  Read questionnaire items aloud with 3- to 5-second pauses between items depending on the reading levels of the students.
  Items should be read with brief pauses between the general text and parenthetical sections to aid in understanding, e.g., "extracurricular (after school) activities."
  Plural versions should be used for items with a plural option, e.g., "parent/guardian(s)".
  Choices (i.e., "strongly agree" to "strongly disagree") are described during the introduction. Following the □ introduction, the questions can be read without the choices. □ **Note:** If students ask, they may work ahead on items if the test administrator's pace of reading is too slow for them.

Student Engagement Instrument

Name: _Text_____   Date: _____

For each statement, please mark the response that best describe you.

		Strongly Agree	Agree	Disagree	Strongly Disagree
1.	My family/guardian(s) are there for me when I need them.	☐	☐	☐	☐
2.	After finishing my schoolwork, I check it over to see if it is correct.	☐	☐	☐	☐
3.	My teachers are there for me when I need them.	☐	☐	☐	☐
4.	Other students here like me the way I am.	☐	☐	☐	☐
5.	Adults at my school listen to the students.	☐	☐	☐	☐
6.	Other students at school care about me.	☐	☐	☐	☐
7.	Students at my school are there for me when I need them.	☐	☐	☐	☐
8.	My education will create many future opportunities for me.	☐	☐	☐	☐
9.	Most of what is important to know you learn in school.	☐	☐	☐	☐
10.	The school rules are fair.	☐	☐	☐	☐
11.	Going to school after high school is important.	☐	☐	☐	☐
12.	When something good happens at school, my family/guardian(s) want to know about it.	☐	☐	☐	☐
13.	Most teachers at my school are interested in me as a person, not just as a student.	☐	☐	☐	☐
14.	Students here respect what I have to say.	☐	☐	☐	☐
15.	When I do schoolwork, I check to see whether I understand what I am doing.	☐	☐	☐	☐
16.	Overall, my teachers are open and honest with me.	☐	☐	☐	☐
17.	I plan to continue my education following high school.	☐	☐	☐	☐
18.	I'll learn, but only if teachers give me a reward.	☐	☐	☐	☐
19.	School is important for achieving my future goals.	☐	☐	☐	☐

Student Engagement Instrument

	Strongly Agree	Agree	Disagree	Strongly Disagree
20. When I have problems at school, my family/guardian(s) are willing to help me.	☐	☐	☐	☐
21. Overall, adults at my school treat students fairly.	☐	☐	☐	☐
22. I enjoy talking to the teachers here.	☐	☐	☐	☐
23. I enjoy talking to the students here.	☐	☐	☐	☐
24. I have some friends at school.	☐	☐	☐	☐
25. When I do well in school it is because I work hard.	☐	☐	☐	☐
26. The tests in my classes do a good job of measuring what I am able to do.	☐	☐	☐	☐
27. I feel safe at school.	☐	☐	☐	☐
28. I feel like I have a say about what happens to me at school.	☐	☐	☐	☐
29. My family/guardian(s) want me to keep trying when things are tough at school.	☐	☐	☐	☐
30. I am hopeful about my future.	☐	☐	☐	☐
31. At my school, teachers care about students.	☐	☐	☐	☐
32. I'll learn, but only if my family/guardian(s) give me a reward.	☐	☐	☐	☐
33. Learning is fun because I get better at something.	☐	☐	☐	☐
34. What I'm learning in my classes will be important in my future.	☐	☐	☐	☐
35. The grades in my classes do a good job of measuring what I am able to do.	☐	☐	☐	☐

Appleton, J.J., Christenson, S.L., Kim, D., & Reschly, A. (2006). Measuring cognitive and psychological engagement: Validation of the Student Engagement Instrument. *Journal of School Psychology, 44,* 427-445.

Student Engagement Instrument

Scoring Procedures

Within each clear box, write the number that corresponds with the rating identified by the student.

4 = Strongly Agree

3 = Agree

2 = Disagree   Example: If a student marked "disagree" for question 1, write

1 = Strongly Disagree   "2" in the clear box within column C to the right of #1.

Item	A	B	C	D	E	F
1						
2						
3						
4						
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23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						
34						
35						
Total						

Student Engagement Instrument

Write each column total in the box next to the column title. Then divide by the number identified to calculate a column average. Average ratings of 3.0 or higher show engagement in school while average ratings below 3.0 s some degree of disengagement. The higher the score, the higher the level of engagement.

Strong Engagement   **Low Engagement**

4   3   2   1
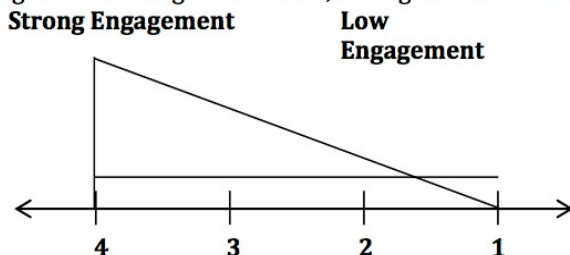
Psychological Engagement

A ☐/9 = ☐   Teacher/Student Relationships

B ☐/6 = ☐   Peer Support for Learning

C ☐/4 = ☐   Family Support for Learning

Cognitive Engagement

D ☐/9 = ☐   Control & Relevance of School Work

E ☐/5 = ☐   Future Aspirations & Goals

Extrinsic Motivation is the only domain in which high scores identify areas of concern and low scores (2.0 or lower) identify that the student's motivation is more internal than external (a positive characteristic of engagement).

F ☐/2= ☐   Extrinsic Motivation