DESSA®

Promoting Student
Well-Being Through a
Risk and Resilience Framework:
Implications for Screening

Riverside Insights®

Table of Contents

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Executive Summary

Mental well-being concerns for our nation's students are on the rise and have been rising steadily for the past decade (CDC, 2021). Although mental well-being interventions in schools can be effective, many students do not have access to support because of shortages of school-based mental health professionals. Supporting students' mental well-being will require a more preventive approach that includes early identification and intervention.

Schools are uniquely positioned to play a role in a preventive, universal approach to supporting students' mental well-being. Through a risk and resilience framework, schools can focus on developing students' protective factors that promote resilience and on identifying their risk factors. Research on students' mental well-being suggests that both the absence of risk factors and the presence of resilience factors are needed to achieve complete mental well-being (Suldo & Doll, 2021).

Risk factors include emotionally and behaviorally dysregulated behaviors that, if left untreated, are often precursors to future mental health concerns. Resilience factors include things like improving academic engagement, developing stronger relationships, feeling more effective as a student, and having a sense of purpose. Developing students' social and emotional competencies has been shown to be a viable method to promote resilience and to address early emotional and behavioral risks (Jones et al., 2015). Although there is a strong association between resilience and well-being, it is unclear whether a measure of social and emotional competence (resilience) provides enough information to proactively identify and support students at risk for low levels of well-being or whether an additional risk-based screener is needed.

Therefore, the purpose of this study was to examine whether measures aligned with a risk and resilience framework were predictive of students' well-being and whether the use of both risk and resilience measures identified a unique group of students in need of intervention.

Two-hundred seventy-one students across the United States and in one U.S. territory participated in this study. Students reported on their demographics and completed three self-report assessments that measured (1) their social and emotional competencies (resilience), (2) their internalizing and externalizing concerns (risk), and (3) their perceptions of their well-being. Data were analyzed to address two main research questions:

1. Does the use of risk and resilience measures identify a broader group of students in need?

2. How accurately does a combination of a student's self-reported internalizing and externalizing behaviors (risk) and their social and emotional competence (resilience) predict students' well-being?

Our findings showed that unique groups of students with a demonstrated need for support were identified using the combination of risk and resilience measures. Additionally, we found that the combination of screening tools accurately classified well-being levels of 70% of the sample.

These findings provide evidence that a combined risk and resilience approach to identifying students who are at risk for low levels of well-being is more accurate than a resilience approach alone. Implications for practice and future research are discussed.

Background and Review of Literature

Supporting students' well-being promotes their healthy development and helps them thrive both academically and personally. Student well-being is highly associated with a wide range of positive social, emotional, academic, and post-school outcomes (Renshaw et al., 2015), and therefore represents an important construct. Importantly for schools, greater levels of individual student well-being are predictive of greater improved *schoolwide* success, suggesting that improved student well-being encourages engagement in the learning environment, which can also improve outcomes for other students (Renshaw et al., 2015).

Strategies that promote well-being are frequently recommended to improve students' mental health and to prevent suicide (Beaulieu & Zaboski, 2021). Focusing on well-being increases healthy coping behaviors and can reduce suicidal ideation, risky behaviors, and substance abuse (Beaulieu & Zaboski, 2021). This is an important finding given the significant increase in the number of adolescents who report low levels of well-being and higher rates of mental health challenges, such as anxiety and depression (CDC, 2023). This trend began nearly a decade ago and was sharply exacerbated by the disruptions to schools caused by the COVID-19 pandemic (CDC, 2021). At the same time, decades-long shortages of school-based mental health professionals have left a growing population of students in need with limited access to services.

Schools are strongly positioned to promote students' well-being given their focus on creating positive, caring learning environments, but the construct of well-being can be difficult to define and operationalize, leaving schools at a loss for specific ways they can best support their students. Student well-being refers to the overall state of a student's mental and emotional health. It encompasses their happiness, life satisfaction, academic achievement and engagement, and ability to cope with challenges they encounter in their social, personal, and academic lives (Renshaw et al., 2015). Translating this broad definition into actionable practice can be difficult, especially in schools where there are high levels of risk factors. In high-risk settings, schools may be less focused on proactive strategies and more focused on responding to immediate concerns. Although well-being strategies are linked to improved outcomes, by themselves they cannot fully address the broad range of student needs.

One solution to these challenges is to operate through a risk and resilience framework that focuses on building specific protective or resilience factors *and* on identifying and mitigating risk factors to help students achieve high levels of well-being. Employing a risk and resilience framework to promote students' well-being would help schools to identify students who require targeted support and to differentiate that support more accurately (Suldo & Doll, 2021).

Risk and Resilience Framework

Strategies grounded in a risk and resilience framework have long been recognized as an effective approach to preventing and treating a range of adolescent problems (Jenson & Fraser, 2006). In general, a risk and resilience framework acknowledges that a student's ability to successfully adapt and thrive is an interactive product that includes the presence of risk factors, the strength and duration of specific risk(s) present, and the resilience factors present in that student's life (Jenson & Fraser, 2006).

Risk and resilience factors are frequently categorized into three levels of influence: (1) environmental, (2) social and interpersonal, and (3) individual. Environmental factors typically relate to things such as socioeconomic status and levels of safety. Social and interpersonal factors center on things such as engagement in school and relationships with family and friends. Individual factors involve things such as attention deficits or learning and behavioral disabilities: conditions that can impact a student's ability to learn.

School personnel may have little influence over factors such as a student's family dynamics or socioeconomic status, and while it is helpful to be aware of them, it is important for schools to focus their efforts on the risk and resilience factors that can be impacted. In the following sections, we highlight some of the risk and resilience factors that are most closely associated with students' mental well-being, that manifest in observable behaviors (for ease of identification), and that are malleable and responsive to intervention.

Risk Factors

One of the primary ways in which teachers recognize students who are at risk is through the display of undesirable or negative emotional behaviors. Researchers typically categorize negative emotional behaviors into two main types: internalizing and externalizing. Internalizing concerns include feeling sad, being withdrawn, having high levels of anxiety, and feeling lonely. Externalizing concerns include aggression, bullying, not following rules, and acting out. These emotional and behavioral concerns, if left untreated, can develop into clinically significant disorders and impact a student's overall functioning and well-being. Teachers can typically recognize students at risk because of externalizing concerns, but they often underidentify students with internalizing problems, particularly in secondary grades where teachers generally teach more students per day (Elliott et al., 2020). This has led policymakers, professional organizations, practitioners, parent groups, and researchers to call for increased screening of internalizing concerns, particularly considering the current mental health crisis among adolescents.

Resilience Factors

Strong social and emotional competence is routinely identified as a factor that promotes resilience, helps students navigate challenges, and leads to long-term success (Cipriano et al., 2023; Durlak et al., 2011; Yeager & Dweck, 2012). Social and emotional competence is typically displayed through skills such as optimistic thinking, emotion regulation, relationship skills, and decision-making skills. Developing these skills is the focus of many social and emotional learning programs, and substantial evidence supports their effectiveness when programs are implemented with fidelity (Durlak et al., 2022). Social and emotional competence is also supported through positive relationships with teachers and peers. Healthy relationships help foster emotion regulation, which enables students to react positively to new challenges and can lead to improved learning (Jenson & Fraser, 2006). Finally, social and emotional learning programs are also a prevention practice in that they reduce emotional and behavioral risks and build positive indicators of well-being (Cipriano et al., 2023; Durlak et al., 2011). Social and emotional competence is often measured using either teacher- or student-completed behavioral rating scales. Many social and emotional assessments are strengths-based, meaning that they focus on positive student behaviors. A benefit of strengths-based measures is that once a student is identified as in need of further assessment or intervention, items from the measure can be used to inform intervention approaches (Beaulieu & Zaboski, 2021).

Current Study

The increasing number of students reporting low levels of well-being and higher rates of mental health challenges, coupled with the shortage of school-based mental health professionals, highlights the need for a preventative, universal approach that assesses students' well-being in ways that provide *actionable* insight to teachers regarding the specific behaviors to build or address. Identifying emotional and behavioral risk factors early offers opportunities to remedy behaviors that can lead to mental well-being concerns or exacerbate existing ones (Ciarrochi et al., 2003; LeBuffe & Shapiro, 2004; Nickerson & Fishman, 2013). Additionally, assessing resilience factors such as social and emotional skills informs teachers how to improve the skills that serve as protective factors for students and that promote their well-being.

Given the close relationship of risk and resilience factors to well-being, however, it is unclear whether the assessment of both is required to identify all students potentially in need of support. Lane et al. (2023) reported that the Devereux Student Strengths Assessment-mini (DESSA-mini), a strengths-based measure of social and emotional skills, and the Student Risk Screening Scale—Internalizing and Externalizing, a teacher-completed, risk-based measure of internalizing and externalizing concerns, identified different groups of students as needing instruction and demonstrated low levels of agreement between the DESSA-mini and the internalizing scale. Similarly, in a study in which parents rated their children's social skills and their emotional behavioral concerns, Elliott et al. (2022) reported that 11% of students with strong social skills were rated as a concern or possible concern on internalizing behaviors and 13% as a concern or possible concern on externalizing behaviors. Conversely, 8% of students with no emotional behavioral concerns were rated as having low levels of social skills. These studies provide evidence that risk and resilience may be viewed as distinct areas rather than just opposite sides of the same coin. It is important to note that neither of these studies relied on student self-report measures.

Therefore, two research questions were addressed in the current study. First, does the use of risk and resilience measures identify a broader group of students in need? Second, how accurately does a combination of a student's self-reported internalizing and externalizing behaviors (risk) and their social emotional competence (resilience) predict students' well-being?

Method

The research procedures for this study were approved by Devereux Advanced Behavior Health's Institute of Clinical and Professional Training and Research institutional review board.

Participants

Participants included 254 students in Grade 6 through Grade 8 from across the U.S. The demographic characteristics of the sample are detailed in **Table 1**. Compared to U.S. student demographics, students who identified as Black or African American, Native Hawaiian or Other Pacific Islander, and Two or More races were overrepresented in this study, and students who identified as Hispanic or Latinx were underrepresented.

Table 1

Demographic Characteristics of Participants

	Student Sample (N = 254)	
	n	%
Grade		
6	100	39 .4
7	87	34 .3
8	67	26.4
Gender		
Male	118	46.5
Female	131	51.6
Prefer to Self-Describe	5	2.0
Race		
American Indian or Alaska Native	2	0.8
Asian	13	5.1
Black or African American	79	31.1
Middle Eastern or North African	2	0.8
Native Hawaiian or Other Pacific Islander	14	5.5
White	46	18.1
Two or More	55	21.7
Prefer to Self-Describe/Missing	12	4.7
Ethnicity		
Hispanic or Latinx	31	12.2
Region of Residence		
Northeast	43	16.8
Midwest	38	14.6
South	117	45.2
West	29	11.1
U.S. Territory	27	10.4
Primary Language Spoken in the Home		
English	207	81.5
Spanish	25	9.8
Other	21	8.3
Receiving Special Education Services		
Yes	30	11.8
No	187	73.6
Unsure	37	14.6

Measures

Resilience Factors

Given the extensive link between social and emotional skills and resilience factors, we used the DESSA Student Self-Report Middle School Edition (DESSA; Robitaille et al., 2023) to assess students' resilience. The DESSA is a 50-item standardized, norm-referenced, self-report behavior rating scale for students in grades 6–8. The items on the DESSA are strength-based and query positive behaviors (e.g., contribute to group efforts) rather than maladaptive ones (e.g., annoy others). Students respond to how frequently they engage in each behavior on a five-choice Likert scale ranging from *Never* (0) to *Almost Always* (4).

The items are organized into six social and emotional competencies: Self-Awareness, Self-Management, Social Awareness, Relationship Skills, Responsible Decision Making, and Optimistic Thinking. T-scores are reported for each of the six scales and for an overall Social Emotional Composite (SEC) score. T-scores are also categorized into three descriptive levels. T-scores of 60 and above are considered a Strength, scores of 41–59 are considered Typical, and scores below 40 indicate a Need for Instruction. Internal consistency reliability ranges from .82 to .87 for the scales and is .96 for the SEC score. Social Emotional Composite T-scores and Descriptive Levels were used for analyses.

Risk Factors

To assess students' internalizing and externalizing concerns, students completed the student report of the emotional behavioral concern (EBC) scales of the Social Skills Improvement System (SSIS; Elliott et al., 2020). The EBC scales include 10 items that collectively assess a range of behaviors that are indicative of internalizing and externalizing concerns. Internalizing concerns are negative emotions and behaviors that are mostly directed inwardly. These involve feeling worried, anxious, sad, or lonely; exhibiting poor self-esteem; or having a lack of interest or limited engagement with others. Externalizing concerns are negative emotions and behaviors mostly directed toward others. These involve verbal or physical aggression, threatening and bullying others, poor temper control, arguing with others, and actively excluding others from activities. Students are asked to think about themselves and decide how true each sentence is. Students then respond to each item using a four-point Likert scale ranging from *Not True* (0) to *Very True* (3). Reliability of the Internalizing Concerns scale is reported as α = .80 and α = .75 for the Externalizing Concerns scale (Elliott et al., 2020). Scores are reported as a sum of item level scores for each scale, and then the summed scores are presented in three levels of concern: *No Concern*, *Potential Concern*, and *Concern*.

Student Well-Being

Student well-being was measured using the Subjective Student Well-Being Questionnaire (SSWQ; Renshaw, 2024; Renshaw et al., 2015). The SSWQ is a 16-item rating scale that measures students' positive emotions, positive relationships, positive values or meaning, and positive performance. Students are asked to read each item and choose the one response that best reflects how they've felt over the past month using a four-point Likert scale ranging from *Almost Never* (1) to *Almost Always* (4). The 16 items comprise four separate scales, Joy of Learning, School Connectedness, Educational Purpose, and Academic Efficacy, and sum to provide an overall composite score. Internal consistency reliability ranges from .73 to .78 for the scales and is .88 for the composite score. The composite score is categorized into four levels of well-being that correspond to the Likert scale descriptions—*Almost Never* to *Almost Always*. The overall composite score and categorical scores were used for analyses.

Procedure

To recruit potential participants for this study, we contacted site coordinators with study details. Site coordinators who agreed to participate were asked to identify students in Grade 6 to Grade 8 who would be good candidates to participate in this study. The site coordinator was then asked to collect active parent/guardian consent by either mailing or emailing the consent letter to the parent/guardian. Students who received consent were then invited to participate in the study. Students were first presented with an assent letter and indicated assent by continuing to complete the survey and the three self-report measures online. The order of the three measures was randomized, as this produces more reliable responses and protects against ordering effects (Stantcheva, 2022; Wilson et al., 2021). The mean time to complete the survey and measures was 38 minutes, with the median being 12 minutes and the mode 8 minutes. Students were compensated with a $10 Amazon gift card to thank them for their time, and site coordinators were compensated with a $100 Amazon gift card if 20 or more students completed the survey.

Upon completing the self-report measures, students were asked to report how many questions they answered honestly and were given the following response choices: (A) all of them, (B) most of them, (C) only some of them, and (D) hardly any of them. Students who answered either C or D to the question about honesty or who took greater than 60 minutes to complete the measures were excluded from data analyses. Seventeen students' responses were excluded using these criteria, leaving a final sample of 254.

Data Analysis

Prior to conducting data analyses, data were screened for out-of-range values and normality. Students' SEC, SSWQ, and Internalizing Concerns scores were within normal ranges using a skewness value range of -1 to 1 (Cox, 2017). However, students' Externalizing Concerns scores had a skewness value of 1.06. A log transformation was completed on this variable, and the skewness value was then in the acceptable range of -1 to 1.

To investigate the first question, we conducted two crosstabs: one of students' DESSA and Internalizing Concerns categorical scores, and one of students' DESSA and Externalizing Concerns categorical scores. To investigate the second research question, we conducted a discriminant analysis using SSWQ categorical scores as the outcome and DESSA composite and EBC-summed scores as the predictors. Box's M test was performed to evaluate the homogeneity of covariance matrices; upon using log-transformed Internalizing and Externalizing Concerns scale scores and SEC T-scores, the test yielded a Box's M value of 12.53 and a p-value of $.43$, thereby indicating that there are equal covariance matrix structures. All analyses were completed using SPSS v. 29.

Results

Table 2 reports the correlations, means, and standard deviations for the study variables. On the DESSA, students' SEC scores were, on average, in the typical range ($M = 49.73$; $SD = 9.54$). On average, students' scores for the Internalizing and Externalizing Concerns scales were in the No Concern range (possible values ranged from 0 to 15; $M_{int} = 3.75$; $SD_{int} = 3.62$; $M_{ext} = 3.26$; $SD_{ext} = 2.48$). Last, students reported experiencing high well-being often (possible values ranged from 0 to 64; $M = 46.43$; $SD = 8.96$).

Table 2

Bivariate Correlations, Means and Standard Deviations for Study Variables

	1	2	3	4
1. DESSA (Resilience)	1	−.35**	−.30**	.74**
2. Internalizing Scale (Risk)		1	.39**	−.42**
3. Externalizing Scale (Risk)			1	−.28**
4. SSWQ (Well-Being)				1
Mean (*SD*)	49.73 (9.54)	3.75 (3.62)	3.26 (2.48)	46.43 (8.96)

One-way ANOVAs were conducted to determine whether differences existed on main study variables with respect to student race or ethnicity, special education status, or the primary language spoken in the home. There was a marginally significant difference between students' DESSA scores based on self-reported special education status, $F_{Welch}(2, 53.09) = 3.30$, $p < .05$, $\eta^2 = .03$, such that students who reported being unsure whether they were receiving special education services or not scored significantly lower ($n = 37$; $M = 45.86$; $SD = 10.75$) than students who reported receiving special education services ($n = 31$; $M = 52.26$; $SD = 11.04$) or students who reported they were not receiving special education services ($n = 187$; $M = 50.07$; $SD = 8.81$). For students' Internalizing Concerns score, there was a significant difference based on students' race or ethnicity, $F_{Welch}(8, 13.45) = 4.38$, $p < .05$, $\eta^2 = .06$, such that Black or African American students ($n = 82$; $M = 2.71$; $SD = 2.98$) reported significantly lower levels of concern than Asian students ($n = 13$; $M = 5.15$; $SD = 4.90$), White students ($n = 48$; $M = 4.23$; $SD = 3.65$), and students who identified with Two or More races or preferred to self-describe ($n = 55$; $M = 4.47$; $SD = 4.06$). For students' Externalizing Concerns score, there was a significant difference with respect to students' primary language spoken at home, $F(2, 256) = 3.81$, $p < .05$, $\eta^2 = .03$, such that students who primarily spoke Spanish at home ($n = 25$; $M = 1.96$; $SD = 2.03$) reported significantly lower levels of concern than students who primarily spoke English at home ($n = 223$; $M = 3.37$; $SD = 2.41$).

Does the Combination of Risk and Resilience Measures Identify a Unique Group of Students?

Tables 3 and 4 present the results of the crosstabs of students' DESSA and EBC scores. Results indicate that 38 (15%) students with DESSA scores in the Strength or Typical ranges had Internalizing scores in the Possible Concern or Concern range. Conversely, 26 (10%) students with Internalizing scores in the No Concern range had a Need for Instruction on the DESSA.

Table 3

Crosstabs of Students' DESSA and Internalizing Scale Categorical Scores

Internalizing Category	DESSA Descriptive Level			
	Strength	Typical	Need	Total
No Concern	37	131	26	194
Possible Concern	2	18	6	26
Concern	2	16	16	34
Total	41	165	48	254

Similarly, 42 (16%) students with DESSA scores in the Strength or Typical ranges had Externalizing scores in the Possible Concern or Concern range, and 25 (10%) students with Externalizing scores indicating No Concern had a Need for Instruction according to the DESSA.

Taken together, these findings indicate that measures of both risk and resilience are needed to identify students who may need targeted support.

Table 4

Crosstabs of Students' DESSA and Externalizing Scale Categorical Scores

Externalizing Category	DESSA Descriptive Level			
	Strength	Typical	Need	Total
No Concern	39	125	25	189
Possible Concern	0	24	13	37
Concern	2	16	10	28
Total	41	165	48	254

Does a Combined Risk and Resilience Measure Accurately Predict Students' Well-Being?

A discriminant analysis was conducted to determine if the students' DESSA and EBC scores could accurately predict their categorical well-being score on the SSWQ. Categorical scores on the SSWQ align with the Likert Scale options where 1 = *Almost Never*, 2 = *Sometimes*, 3 = *Often*, and 4 = *Almost Always*. **Table 5** shows the means and standard deviations for each of the groups based on students' categorical well-being score. This table shows that students in the lower category of well-being had DESSA scores that are 1 *SD* below the mean, whereas DESSA scores increased as SSWQ category increased. Students in the highest level of well-being had average DESSA scores of 1 *SD* above the mean. Mean internalizing and externalizing scores decreased (indicating fewer concerns) as well-being categorical scores increased, from 6.02 to 1.76 for internalizing and from 3.96 to 2.25 for externalizing. A univariate ANOVA showed that the differences in group means were significant ($p < .002$) for each of the three predictors, and post hoc analyses indicated that mean differences were significant between groups with the exception of externalizing scores for students with SSWQ categorical scores of *Sometimes* and *Often*.

Table 5

Means and Standard Deviations of Predictor Variables
by Student Well-Being Category

Predictor Variable	Student Well-Being Category	Mean	SD
DESSA	*Sometimes*	40.13*	5.79
	Often	50.39*	7.29
	Almost Always	60.55*	7.75
Internalizing Scale	*Sometimes*	6.02*	4.03
	Often	3.43*	3.29
	Almost Always	1.76*	2.36
Externalizing Scale	*Sometimes*	3.96	2.77
	Often	3.27	2.30
	Almost Always	2.25*	2.37

*Differences between groups are significant at the .05 level.

The discriminant analysis revealed one significant and one non-significant function. The significant function had an eigenvalue of .889 and explained 99.6% of the variance. Wilks' lambda was significant for this function at .52 and a *p*-value < .001. The structural loading indicated in **Table 6** represents the correlation of each variable with the discriminant function, and the higher the value, the higher the importance of the variable in explaining the variation in the discriminant function.

Table 7 presents the classification results. This discriminant function correctly classified approximately 70% of students' reported well-being levels.

Table 6

Structural Loadings for Two Discriminant Functions

	Function	
	1	**2**
DESSA Scores	.950	.229
Internalizing Scores	-.426	-.641
Externalizing Scores	-.225	-.460

Table 7

Predicted and Actual Group Membership in Well-Being Categories

		Predicted			
		Sometimes	*Often*	*Almost Always*	**Total**
	Sometimes	31	28	0	59
	Often	14	130	8	152
Actual	*Almost Always*	0	26	17	43

Note. 70.1% of original grouped cases accurately classified.

Discussion

Students with high well-being often do better academically, have stronger relationships, feel more effective in school, and have a sense of purpose (Renshaw et al., 2015). Well-being is an important construct on which schools should focus, but because it can be difficult to define and operationalize, screening tools that are highly predictive of well-being and that provide actionable data may be more useful to teachers. Results from this study highlight the importance of measuring *both* risk *and* resilience factors to predict students' well-being and to inform potential interventions.

This study also investigated the relationship of well-being with risk and resilience factors using student-reported tools. This is important for two reasons. First, integrating students' voices into their own development fosters their motivation (Ryan & Deci, 2020) and promotes the development of resilience factors such as social and emotional competence, self-determination, and agency (Collie, 2020). Second, this study provides evidence that middle school students can reliably and validly report on their own behaviors. Self-report measures are integral to understanding the nuances of students' behaviors (Keefer, 2015), and, more practically, the use of student self-report measures is more efficient than teacher-reported measures.

Study Limitations

There are several limitations of the current study that warrant caution when generalizing findings. First, although we recruited a diverse sample of students, the demographics did not mirror the larger U.S. population. Second, we relied on student self-report about whether they were receiving special education services, which limits our ability to know the exact percentage of students receiving these services. Finally, although we had a large and diverse sample, no students in the current study reported well-being scores in the *Almost Never* category. Without having representation across all categories of the SSWQ, it is challenging to fully understand the extent of the relationship between the studied variables.

Conclusion

This study provides evidence that a risk and resilience framework that considers social and emotional skills as resilience factors and emotional and behavioral concerns as risk factors is a helpful heuristic for predicting students' well-being. Additionally, this study demonstrated that both risk and resilience measures are needed to identify students' needs. Future research that includes a sample with well-being scores across the full range of descriptors and that examines the treatment validity of this screening approach is needed to provide schools with the information and implementation guidance to support their students' well-being.

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