Resilient, Mindful, and Satisfied Educational Professionals

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Abstract
This study conducted confirmatory factor analysis (CFA) and exploratory factor analysis (EFA) using both the Connor-Davidson Resilience Scale (CD-RISC 25) and the Mindfulness Attention Awareness Scale (MAAS) to create a validated, synergistic, higher-order factor we call invicti anima, based on the responses of 630 teachers and building-based educational leaders in three northeastern US states. Controlling for important contextual variables including educator sense of agency, our structural equation path model mapped the relationships between educator role, level of invicti anima, and job satisfaction, as measured by the job satisfaction Index (JSI). The educators in our study who were strong in invicti anima exhibited characteristics of both resiliency and mindfulness and were significantly and substantially more satisfied on their jobs, even net of their sense of control (agency) in their schools. Our findings have important implications for the professional development of educators in dealing with stress, longevity in their positions, and positive outcomes for the students and others under their direction.

Keywords
resiliency, mindfulness, educator job satisfaction, social and emotional learning

> *"Stress is part of life, part of being human, intrinsic to the human condition itself. But that does not mean that we have to be victims in the face of large forces in our lives. We can learn to work with them, understand them, find meaning in them, make critical choices, and use their energies to grow in strength, wisdom, and compassion."* (Kabat-Zinn, 1994, p. 30)

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> *"You may not control all of the events that happen to you, but you can decide not to be reduced by them" (Angelou, 2009, p. xii).*

The current study sought to understand specific and unique psychological predictors of job satisfaction among a large sample of teachers and educational leaders in the northeastern United States. We validated a higher-order psychological construct which we term invicti anima (unconquerable soul). Invicti anima includes a unique combination of personal resiliency and mindfulness characteristics which are separate validated constructs, yet which combine synergistically to strongly predict teacher and educational leaders' satisfaction on the job, controlling for important extraneous factors. Our findings have important implications for training educational professionals in stress reduction techniques.

Background

The roles of teachers and school administrators in the United States have experienced seismic shifts over the years and will likely continue to evolve in the twenty-first century. Once viewed as adults who primarily parsed out bits and pieces of information to students as they saw fit, the duty of today's teachers has expanded much beyond that simpler role. Likewise, school administrators such as principals and assistant principals are now deemed "educational leaders," and the term "teacher leader" is a role bestowed on designated teachers and most administrators in both formal and informal ways in today's public schools.

Educational professionals working in schools are challenged to serve as adjudicators of behavior, buildings, and grounds overseers, change agents, classroom support consultants, collaborative partners, community organizers, curriculum supervisors, data experts, deliverers of curriculum, financial experts, instructional specialists, parent resources, personnel authorities, surrogate parents, and union negotiators—among other roles. In short, teachers and the professionals with whom they work, as well as school leaders, work in increasingly stressful school environments. These changing and challenging school dynamics raise the important question of how educational professionals can best cope with the pressure cooker conditions which typify many American public schools.

All educational professionals within the school building increasingly collaborate as they assume greater responsibility for educating the whole child, including their social and emotional dimensions (ASCD, 2020). Helping the young learner build positive relationships, resist dangerous risks, and enjoy a fulfilling future are core missions that begin with positive adult interactions (Search Institute, 2008). Indeed, the call is now going out to recruit teachers high in both "emotional resilience" and mindfulness in order to fill this more ambitious educational mission (Aguilar, 2018). Educators are tasked with all of these growing responsibilities even as school professionals are being scrutinized and criticized as never before by a skeptical public in an increasingly poisoned and fractious political atmosphere where schools have become ground zero in the culture wars tearing at America's fabric (Ujifusa, 2022).

In this study we have included a sample of both teachers and school leaders, because both categories of professionals work together in the same physical space and toward the same goals for children: they are all on the same mission in the pressure cookers together. However, their differing roles, and differing levels of agency, could conceivably result in differing levels of stress and job satisfaction. Thus, in addition to validating first and second order psychological factors associated with of job satisfaction, our study seeks to more accurately parse out the degree to which professional school roles mitigate the

relationship between stress coping mechanisms and job satisfaction. Therefore, below we discuss the stress inherent in both categories of educator roles separately.

Teacher Stress

Teachers who report high levels of stress are not satisfied on the job (Ho & Au, 2006). These high levels of stress have in turn led to increased burnout and high turnover rates among teachers (Borman & Dowling, 2008; Heus & Diekstra, 1999; Schaufeli & Enzmann, 1998; Sutcher et al., 2019). Moreover, this stress is not isolated. One study found that only 7% of its sample of teachers rated themselves as low in stress and well-adjusted, with 1/3 indicating some level of burnout (Herman et al., 2018). According to Sutcher et al. (2019), teacher attrition rates in the US are roughly twice that of other developed, high-achieving countries, with the highest rates in high poverty, high minority schools. Disaffection with teaching, a likely outcome of a highly stressful and demanding environments, rendered ever more stressful by the recent COVID-19 disruptions, accounts for a large percentage of the attrition rate (Sutcher et al., 2019).

Educators who deal poorly with stress are not optimal role models for students who need a calm, emotionally stabilizing presence in their lives (Aguilar, 2018). To the extent that stress results in high turnover rates, students suffer yet again from a revolving door of often inexperienced educational teachers and leaders starting anew the process of reconnecting with other staff, as well as building new relationships with disoriented students and their families (Carroll et al., 2000). Indeed, high teacher attrition rates and a relatively low supply of qualified candidates in many parts of the U.S. are making it hard to staff positions with certified teachers, much less with teachers who are also resilient and mindful (Sutcher et al., 2019).

Kyriacou and Sutcliff (1977), the researchers who first coined the term "teacher stress," explained this phenomenon as teachers experiencing unpleasant emotions such as anger, tension, frustration, anxiety, depression, and nervousness due to their work as educators. In an evolution of thinking about teacher stress, Kyriacou (2001) stated that, "Teacher burnout refers to a state of mental, emotional, and attitudinal exhaustion in teachers which results from a prolonged experience of stress" (p. 27). Kyriacou identified two categories of coping strategies: direct action and palliative techniques. As the name implies, direct action involves teachers managing stress themselves, problem solving, and doing what they can to eliminate or reduce those *external* factors which cause stress. Palliative techniques are *internal* strategies the practitioner uses to lessen the physical and emotional toll of stressful triggers. Palliative strategies can include "Mental strategies [that] involve the teacher in trying to change how the situation is appraised" (Kyriacou, 2001, p. 30). "Mindfulness", discussed in detail below, would be an internal, palliative technique, whose practice results in decreasing feelings of stress. The end result of employing stress-reducing strategies is to keep satisfied teachers at their jobs (low turnover) which in turn should result in increased student motivation and achievement (Caprara et al., 2003; Ronfeldt et al., 2013).

School Leadership Stress

According to the National Center for Education Statistics, the turnover rate for principals in U.S. schools is 18% (Goldring & Taie, 2018). Seventy-five percent of principals describe their jobs as too complex, unsatisfying, and unsustainable (Fullan, 2014). The complexity of the day-to-day work

environment of an administrator in a school seems to encourage and even reward the ability to multitask: i.e., perform multiple tasks simultaneously. Spillane and Lee (2014) spoke of the "reality shock" a cohort of new Chicago Public School principals experienced as they sought to adjust to the responsibility of their roles, the increase in work volume, and unpredictability seemingly inherent in the role of principal.

Humans are not good multitaskers. Moving rapidly between tasks while responding to shifting demands has been shown in studies to reduce creativity, increase stress, and lower productivity (Bawden & Robinson, 2009; Dean & Webb, 2011; Hallowell, 2005). The more complex the disparate tasks involved in the constant shifting of attention, the less efficient we become (Rubinstein et al., 2001; Yeung & Monsell, 2003). Given the very complex and dynamic nature of running a modern American school, requiring educational leaders to constantly shift attention among a school's many ongoing problems (curricular, disciplinary, personnel, facilities, scheduling, etc.), while trying to please multiple constituencies (students, teachers, other school professionals, parents, school district personnel, and school boards) takes a physiological toll while hurting school leader productivity.

In addition to the many other demands on their leadership skillsets, a particularly daunting challenge facing busy school leaders today is ensuring that their teachers and students feel connected to their schools (National School Climate Center, 2014). Meaningful and substantive student-to-adult relationships cannot take hold in schools where adults leave their jobs at such alarming rates, since students must continually start anew the process of forming these critical relationships. This instability caused by change would seem to have important negative consequences for student social and emotional learning (SEL). And to the extent that student SEL is related to concrete academic outcomes, educator churn is also influencing the bottom line in schools. That principals indirectly influence student academic outcomes is now generally accepted. Waters et al. (2003) conducted their own meta-analysis of principal leadership and synthesized 70 studies from 1970-2000. They found statistically significant indirect effects of principal leadership on student outcomes. Their study revealed that the correlation (r) between leadership behavior and student academic achievement is .25, a sizable relationship over the long-run (Waters et al., 2003). More recent research by Bartanen et al. (2019) confirmed the negative relationship between principal turnover on the one hand, and both student achievement *AND* teacher turnover, on the other. If quality assistant principals and principals are to be retained, we must address ways to help them manage the stressors that accompany their tumultuous jobs and contribute to the tremendous turnover in school leadership.

Community Costs of Educator Stress

The negative consequences of stress do not only have detrimental consequences for educational leaders, teachers, and students. These consequences radiate throughout the entire community. For example, consistently high turnover rates have very real economic consequences for school district coffers (School Leaders Network, 2014). It typically costs $75,000 to hire and place a properly prepared professional in a school leadership role, an economic investment that can reach $303,000 in affluent school districts (School Leaders Network)—a cost that is no doubt rising dramatically in these inflationary times. Total educator "churn" (including replacing teachers) is estimated to cost the U.S. 8 billion dollars annually (Sutcher et al., 2019). This fact does not bode well for efforts to close achievement gaps.

Dealing with Stress

While the jobs of teachers and school administrators is inherently stressful and perhaps getting more so, research is clear that how individuals deal with stress varies, and that those who have an optimistic "stress-is-enhancing vs. stress-is-debilitating" mindset use stress to their advantage (Crum et al., 2013; Kim et al, 2020). Crum et al. (2013) have demonstrated that positive stress mindsets can be cultivated, and that those who adopt them show certain physiological and behavioral improvements over those who view stress more negatively.

Specifically as regards educators, Kim et al. (2020) showed that a sample of Korean educators who had more positive stress mindsets had lower turnover rates compared to a matched sample of educators who viewed stress more negatively. Indeed, they discovered that positive views toward stress among the Korean preschool educators was actually associated with a decrease in stress.

So, there is evidence that individuals who have more positive attitudes towards stress are able to harness the stress to their advantage. This ability is closely associated with the psychological construct of resiliency (Connor & Davidson, 2003). Yet other techniques for dealing with stress are identified with the practice of mindfulness, which involves becoming more focused and determined in the face of increased stress, often through meditative-type practices (Brown & Ryan, 2003; Frank et al., 2015). When individuals can meld the characteristics of both mindful and resilient behaviors together in the face of stress, we would predict a particularly potent attitude and orientation leading to greater personal satisfaction, including on the job. And greater satisfaction on the job would seem to logically predict greater longevity in one's position, with more time to develop and refine professional expertise, and in the case of educators, stronger and longer-lasting connections with students and other school staff members.

American schools are ideal high-pressure, stress-filled environments in which to study how the practice of resilient and mindful behaviors on the one hand, are related to job satisfaction, on the other. The entire field of education benefits from teachers and school administrators who can perform two important functions: 1) model the attributes of resilient behavior, and 2) embrace the practice of mindfulness, thus modeling a focus on self-care and stress-reducing techniques.

The level of support received, and the expectations put on teachers and administrators, will likely not change. Indeed, expectations and demands may continue to increase in the education profession over time, creating ever more stressful school environments. However, adults can adjust their perceptions of how they experience this "turbulence" (Myers, 2014). It has been demonstrated that adults can adapt a more "stress-is-enhancing" mindset, which is in turn related to certain positive physiological and behavioral outcomes (Crum et al., 2013), including longevity in teaching positions (Kim et al., 2020).

Stress Mindsets & Resiliency

According to Connor and Davidson (2003), "Resilience embodies the personal qualities that enable one to thrive in the face of adversity" (p. 76), which, according to Rutter (2012), results in "reduced vulnerability to environmental risk experiences, the overcoming of a *stress* [emphasis added] or adversity, or a relatively good outcome despite risk experiences" (Rutter, 2012, p.336). To have a stress mindset is to be resilient. The literature on having a stress mindset, along with instruments to measure it like Crum et al.'s Stress Mindset Measure (SMM-G) (2013), are capturing an essential dimension of

resiliency.

There has been much research conducted on the importance of resiliency (Connor & Davidson, 2003; McAllister & McKinnon, 2009; Garmezy, 1974, 1985; Rutter, 2012), and how this construct is associated with many mental, physical, and life-outcome benefits (Rutter, 2013). For example, representative of the items on Crum et al.'s SMM designed to capture a "stress-is-enhancing" mindset, is the item "Experiencing this stress enhances my performance and productivity" (p.732). A similar item from the Connor-Davidson Resiliency Scale (2003) designed to measure resilient behavior reads, "Under pressure, I stay focused and think clearly." Both items capture a positive orientation to stress, though the Connor-Davidson Resiliency Scale (2003) captures more broadly other dimensions of resiliency as well, including reasons for persevering in the face of obstacles (more about this below).

As Rutter (2012) has observed, resiliency is not just a positive attitude, which he notes is an idea propagated by the popular positive psychology movement. Rather, Rutter (2006) defined resiliency more broadly as producing a good psychological outcome for individuals despite having endured negative experiences that we would otherwise expect to result in negative outcomes. Thus, we argue in this study that the items we use from the Connor-Davidson Resiliency Scale (2003) capture well the stress-is-enhancing mindset of the resiliency construct, as well as the fuller dimension of this construct.

Mindfulness

Mindfulness, too, is a construct related to having a stress mindset, and even enhancing resiliency (Linder & Mancini, 2021), but is in some ways qualitatively very different. There is not unanimity of agreement about how to define mindfulness (Davidson & Kazniak, 2015), though there are many commonly understood characteristics of the practice. For the purposes of this paper the essence of mindfulness was summed up well by the Buddhist monk Nyanaponika Thera (1972) who defined the attribute as "the clear and single-minded awareness of what actually happens to us and in us at the successive moments of perception" (p.5). Indeed, the Pati language root for the word means "having awareness" (Bodhi, 2000). Relatedly, Kabat-Zinn (1994), who designed the Mindfulness-based Stress Reduction program (MBSR), emphasized the importance of focusing on the present moment. He states that mindfulness means "paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally" (p. 15). Davis and Hayes (2011) echo the centrality of present-tense awareness and the suspension of judgement in their working definition of mindfulness. The suspension of judgement is a common theme throughout the literature on mindfulness meditation. This action involves avoiding "falling prey to our own likes and dislikes, opinions and prejudices, projections and expectations" (Kabat-Zinn, 1994, p.16). Suspending judgement of others would seem to be critically important in the diverse environments which characterize most schools.

The emphasis on measuring the extent to which individuals are focusing on the present moment (and thus, not multitasking) was the purpose behind the creation of the Mindfulness Attention Awareness Scale (MAAS) created by Brown and Ryan (2003). We adopt the commonly accepted notion of the importance of present-tense awareness as a defining characteristic of mindfulness, and use items from the Brown and Ryan MAAS scale in the current study.

The empirical study of and actual training in mindfulness is most often associated with "mindfulness meditation" (Davis & Hayes, 2011, p.199). According to Kabat-Zinn (1994), mindfulness meditation is "the systematic cultivation of wakefulness, of present-moment awareness" and of developing in the wisdom that our path through life "is always unfolding, moment by moment; and that what happens

now, in this moment, influences what happens next" (p.10). Mindfulness meditation is linked to many positive outcomes, including being less reactive (Cahn & Polich, 2009; Frank et al., 2015; Goldin & Gross, 2010; Ortner et al., 2007; Siegel, 2007), and—particularly germane to this study—more adaptive to stressful or negative situations (Cahn & Polich, 2006; Davidson et al., 2003; Frank et al., 2015). A meta-analysis of 39 studies found that mindfulness-based therapy was associated with significant reductions in anxiety and depressive symptoms (Hoffman et al., 2010). Mindfulness training has been linked to both increasing positive emotions (Erisman & Roemer, 2010; Jha et al., 2010) and working memory (Chambers et al., 2009; Jha et al., 2010). If one can more objectively analyze one's mental and emotional state, one is in a better position to manipulate it—rather than be manipulated by it.

Relatedly, being highly trained in mindfulness meditation is associated with the ability to quickly reset following negative stimuli (Ortner et al., 2007). Being self-aware and exercising self-control is logically related to the ability to be resilient. However, mindfulness is not resiliency. Perhaps the most important difference is that mindfulness meditation, in particular, is associated with promoting empathy for others (Anderson, 2005; Martin, 1997; Neumann & Tillott, 2022; Morgan & Morgan, 2005; Shapiro & Izett, 2008; Walsh & Shapiro, 2006), and self-compassion (Frank et al., 2015; Shapiro et al., 2005; Shapiro et al., 2007). Empathy is undoubtedly one of the most important characteristics an educator can possess. Mindfulness and resiliency overlap, as we will show in the current analysis, and are statistically correlated (Linder & Mancini, 2021), but they are independent qualities and behaviors which we contend interact in a synergistic fashion, which we refer to as "invicti anima," to produce a quality that is superior to either.

Invicti Anima

The research suggests that individuals who are able to simultaneously exhibit the behavioral and mental attributes associated with both resiliency and mindfulness would be particularly impervious to the negative aspects of stress. Indeed, it is logical to expect that these individuals would be more likely to thrive under the weight of stressful situations typical in a modern American school setting. As obvious as this may seem, we were unable to locate any previous research that did more than suggest that resiliency and mindfulness do more than just overlap and influence each other. Our study goes further, and suggests that these two constructs are in fact component parts of a higher-order psychological profile that is greater than the sum of either factor separately.

Educators high in this collection of attributes should be able to exercise the tenacity to persevere while simultaneously employing the meta-cognitive qualities necessary to appreciate and understand the context of the moment, finding meaning and even (non-judgmental) compassion and empathy in their challenging experiences. Thus, individuals high in this construct do not just "get through" the day—they are vivified by the rich and even stressful experiences in their day. It would be desirable to have educators high in both resiliency and mindfulness to be teaching our students and leading our schools.

Purpose of Study

We postulate in this study is that there is a combination of personal qualities which characterize both resilient and mindfulness behaviors, and which come together in a unique, identifiable pattern which constitutes a valid higher order construct (a separate domain of measurable behaviors). We use the term "invicti anima" (Latin for unconquerable soul) to define this unique combination of traits, because we

posit that these traits act together in a synergistic fashion. That is, possessing these traits enables one to not only muddle through their daily challenges, but actually be energized by stressful work environments to an extent that leads to increased job satisfaction. Modern American schools are stress-inducing pressure cookers for the educational professionals who work in them. We posit that the greater the amount of measured invicti anima that these professionals possess, the more satisfied they will be in their work environments.

To test our theory, we first conduct confirmatory factor analyses to empirically assess the validity of both the resiliency and mindfulness constructs among our sample of surveyed educators, and then create even more statistically refined measures of these factors. Next, we assess the validity of a second order (higher order) factor which is a combination of both resiliency and mindfulness traits, and which we term "invicti anima." Finally, we create a path model to determine the extent to which invicti anima is associated with job satisfaction among a large sample of teachers and school administrators, controlling for (statistically removing the effect of) important extraneous (potentially confounding) factors.

Educator Agency

One such important extraneous factor associated with schools in America is "agency," or more precisely, a lack thereof. Teachers and school administrators work in conditions where much is expected of them: thus, the stressful work environments. They may have a sense of learning mandates being imposed upon them from above without their input (creating a sense of a lack of agency), such as occurred during the COVID-19 pandemic, as opposed to being initiated by them in a collaborative environment. Very often educators feel they have little or even no control over these external forces (Dean & Webb, 2011; Fullan, 2014)—and in fact they may be relatively powerless to affect policy changes.

When the individual is receiving little support, feeling unprepared for the stressor, and feeling like they are not in control of the situation, the adrenaline and cortisol "stress hormones" (Mayo Clinic, 2019) are released in the brain and body, and can influence how the individual responds to that perceived stressor (Hallowell, 2005). However, we would expect that individuals high in both resiliency and mindfulness—invicti anima—would be particularly well equipped to deal with the potential negative influences (mentally and physiologically) of the stress caused by not having agency.

Having the ability to remain tranquil by practicing mindfulness and utilizing various resiliency tools to help work around, over, and/or through the stress generated by a lack of agency may take the sting out of not having a voice in policy making. This is in part due to a mindset that is more accepting and at peace over those dynamics in one's environment over which one has no control. This individual may then be in a better position to problem-solve, take control of those things that *are* within their purview, and non-judgmentally move on, with their empathy intact. Thus, it would seem important in a study like the present one to control for a sense of agency, something we do with a strategically worded survey question. We want to know whether net of a sense of agency (e.g., regardless of one's sense of control over externalities), if those high in invicti anima are still able to derive satisfaction in their educational settings.

Research Questions

This study attempted to answer the following questions among a sample of 630 school-based teachers and administrators in three northeastern US states:

1. To what extent are resiliency and mindfulness distinct, measurable, and valid constructs?
2. To what extent are resiliency and mindfulness component parts of a higher-order (second-order) factor (which we term "invicti anima")?
3. If a higher-order factor exists, what is the magnitude (statistical strength) of the relationship between this factor and job satisfaction, controlling for possible confounding variables?
4. If a higher-order factor exists, does educator role (teacher vs. administrator) and/or sense of agency moderate the relationship of this factor on job satisfaction, controlling for other possible confounding variables?
5. If a higher-order factor exists, does the hypothesized SEM path model with this higher-order factor fit the data significantly better than the SEM model with mindfulness and resiliency entered as separate factors (suggesting synergy)?

Methodology

Data

The non-random sample participating in this study was comprised of public school teachers and those professionals who assist them, as well as building level administrators working in K-12 schools in three northeastern USA states. We chose to include teachers and those professionals working with them, as well as administrators, given that both groups of professionals are working together in the same environments toward the same broad goals. Also, the vast majority of administrators began their careers as teachers or other school-level professionals. We wanted to be able to determine the relationship between role in the school setting, and other variables such as level of invicti anima, job satisfaction, and agency.

The subjects in our study were solicited through email and in-person. Email solicitations were sent to lists of school climate coordinators, superintendents, a tri-state education consortium of the three targeted states, and cooperative educational services organizations. Respondents were asked to complete a survey via a SurveyMonkey link or QR Code, then pass the link along to other potential subjects, thereby contributing to a large snowball sample. To afford anonymity to respondents, specific identifiable information regarding school or location was not collected. The SurveyMonkey link was open for collection on May 2, 2016 and closed on July 31, 2016.

There are limitations with our sampling. These include the geographical limitation of place, as only educators in the northeast USA were targeted. There may be something peculiar about educators practicing in the northeast compared to other parts of the country. Another limitation is the non-random nature of the sample: respondents decided whether or not to participate, introducing the possibility of a systematic bias in the kinds of individuals who decided to complete our survey. Also, we cannot verify that the responses provided actually came from teachers or other building professionals, and administrators: others may have responded. Finally, the data predate the tumultuous political climate and COVID-19 pandemic which followed the administration of the survey.

Survey Instrument

The 53 items on our survey included all 25 items from the Connor-Davidson Resiliency Scale (2003), the 15 items from the Mindful Attention Awareness Scale (Brown & Ryan, 2003), five questions from

the Job Satisfaction Scale (Brayfield & Rothe, 1951), demographic questions, questions about the respondents' position and job location, and a question about sense of educator agency. Permission was obtained to administer questions from the Resiliency and Mindfulness instruments from their respective authors (available upon request). The Job Satisfaction Scale is in the public domain, though the APA granted us explicit, written permission to use it. Our entire survey is available from the authors upon request.

The Connor-Davidson Resiliency Scale (CD-RISC-25, Connor & Davidson, 2003) survey items include a five-point Likert Scale with possible responses ranging from 1=not true at all to 5=true nearly all the time. All survey items were worded such that high numerical responses indicated high resiliency. The Cronbach's alpha of all resiliency survey items among our sample was $\alpha = .878$ ($\alpha = .890$ in original study), indicating a high degree of internal reliability.

The Mindful Attention Awareness Scale (MAAS—Brown & Ryan, 2003) was made up of fifteen Likert-scale items with six possible responses measuring degree of mindfulness practice where 1 = "almost never" and 6= "almost always." The Cronbach's alpha of all mindfulness survey items among our sample was $\alpha = .904$ ($\alpha = .820$ in the original study), indicating a high degree of internal reliability. Job satisfaction was measured through the use of five items found on the Brayfield & Rothe Job Satisfaction Scale (1951). The Cronbach's alpha of $\alpha = .822$ among our sample indicates a high degree of internal reliability (a close equivalent measure of reliability in the original study was .870).

Definition of Relevant Terms

Mindfulness. "[T]he clear and single-minded awareness of what actually happens to us and in us at the successive moments of perception" (Thera, 1972, p.5).

Resiliency. "[T]he personal qualities that enable one to thrive in the face of adversity" (Connor & Davidson, 2003, p. 76).

Invicti Anima. A term used by the authors to identify a second-order construct (psychological factor) composed of elements of both resiliency and mindfulness traits. Conceptualized as one's ability to persevere through challenges while remaining centered (in touch with and at peace with ourselves) resulting in one changing the work environment rather than being changed by external, work-related stress. Invicti anima, meaning in Latin "the unconquerable soul," conceptualizes the character traits of an individual who possesses a certain synergistic combination of resiliency skills and mindful practice, superior to either of these separate factors by themselves.

Job satisfaction. "[T]he gratification of the worker's needs and aspirations derived from employment" (Krantz & McCeney, 2002, p. 341). "Job satisfaction could be inferred from the individual's attitude toward his work" (Brayfield & Rothe, 1951, p. 307).

Educator sense of agency on school's culture. The extent to which educators feel that their voices are heard in their school environment.

Control Variables

Educator role. Teacher, counselor, specialist, lead teacher (coded as 0); School-based administrator (principal, asst. principal, dean, director, dept. chair) (coded as 1)

Gender. Binary choice of male (coded as 0) or female (coded as 1)

Self-reported socioeconomic status (SES) of respondent's school. Likert scale of 1 to 5, with 1=most needy and 5=most affluent

Years in education. Total number of years educator has been in the field of education. Had four ordinal response categories ranging from "10 or less years" to "31 or more years."

Years in role. Total number of years educator in present role. Had six ordinal response categories ranging from "under 3 years" to "16 years or more."

Age. Educator's age selected from five ordinal age-range categories from "under 30 years" to "60 or older."

Educator sense of agency on school culture. Response to question: "Thinking about the overall culture in your school, how would you describe the extent to which the professionals in your school generally feel that their voices are heard, e.g., that their opinions are supported and taken into consideration as part of the decision-making and planning of new initiatives." Three ordinal responses ranged from "Low support from authorities and low control regarding school initiatives" to "high support from authorities and high control regarding school initiatives."

Case Analyses and Variable Recoding

A total of 682 participants accessed the survey with a final usable dataset containing 618 cases. SPSS (ver. 26) was used to analyze the overall summary of missing values. Out of 31,849 possible values, only 905 (2.8%) were missing data. Missing Value analysis confirmed the data to be monotone, meaning missing and non-missing cells are contiguous and no "islands" of missing data are evident. Little's MCAR test was significant ($p = .047$), indicating that the data were not missing completely at random (MCAR). Therefore, Listwise or Pairwise methods of dealing with missing data were not appropriate. Additionally, such methods are no longer the industry standard and are considered to be inferior as there are limitations to their use (Byrne, 2016). For this dataset, using Maximum Likelihood (ML) with SEM is a preferred mechanism for dealing with missing data, and is likely to produce the most reliable and unbiased estimates.

Statistical Procedures

This study used SPSS AMOS (ver. 25) to conduct confirmatory factor analysis (CFA) and exploratory factor analysis (EFA) with structural equation modeling (SEM) to validate the factors of resiliency and

mindfulness from previously validated survey instruments, and then create more refined measurement models of these two constructs. Next, we determined whether these two individual factors could be combined to form a broader second-order factor, and having provided evidence for the existence of this higher-order factor, named this construct.

Finally, a structural path model was created which measured the association of this second-order factor with the validated and refined construct of job satisfaction, controlling for educator sense of agency, role, years of educator experience in his/her role, age, gender, and the affluence of the school district. The SEM indices used to assess model fit included chi-square, the Normed Fit Index (NFI), the Comparative Fit Index (CFI), PClose (p of Close Fit), the root mean squared error of approximation (RMSEA), and the standardized root mean square residual (SRMR). Note SRMR is not reported in the AMOS SEM output for models with missing values. Ninety-five percent confidence intervals are reported for the RMSEA values.

Results

Descriptive Statistics and Bivariate Correlations

Table 1 presents descriptive statistics for the study variables. (The resiliency, mindfulness and job satisfaction indices are reported prior to trimming and transformation by SEM.) The number of respondents identifying as female (n=407) outnumbered those identifying as male (n= 175). About 40% of the male subjects coded themselves as "administrators" compared to 25.6% of the females. Most respondents felt that they had at least a moderate amount of agency on their schools' cultures (55.0%), with almost a quarter indicating a high level (23.8%).

The resiliency, mindfulness, and job satisfaction factors presented in the correlations in Table 2 represent the newly trimmed and transformed latent variables, as well as the second-order factor invicti anima, which combines elements of Resilience and mindfulness (all described in detail below). The factor of resiliency is positively, moderately and significantly related to the factor of mindfulness (r= .376, p< .001). There is a slightly weaker, but still significant relationship between resiliency and job satisfaction (r= .212, p< .001). The relationship between mindfulness and job satisfaction is small, though statistically significant (r= .109, p< .01).

The moderate and significant relationship between the perceived level of agency on school culture and job satisfaction indicates that as the perception that the school culture was supportive increased, so did one's job satisfaction (r= .225, p< .001). Age has a moderate to weak, but significant relationship to both resiliency (r= .213, p< .001) and mindfulness (r= .183, p< .001). Thus the older the respondent, the more resilient and mindful they were. invicti anima is positively and moderately correlated with job satisfaction (r=.460, p<.001), Agency (r=.190, p<.001), and Role (r=.241, p<.001—administrators are significantly higher in invicti anima than are teachers). Invicti anima's much stronger relationship to job satisfaction than either of its constituent parts (resiliency and mindfulness) is bivariate evidence that these two lower order factors interact in a synergistic fashion with each other. Importantly, those high in invicti anima were in the education profession for longer than those lower in this psychological construct (r=.290). Finally, invicti anima is completed unrelated to the SES status of the school (r=-.028), suggesting that level of this psychological construct in not contingent upon the affluence of the students in the school.

Table 1
Descriptive Statistics for Research Variables

		N	%	Min	Max	M	SD	Kurtosis	Skewness
Resiliency		618	23.8	65.0	125.0	103.2	9.83	-.04	-.29
Mindfulness		587	55.0	15.0	89.0	62.6	12.50	.01	-.42
Job Satisfaction Index		586	21.2	5.0	20.0	15.9	2.02	5.07	-1.66
School SES		578		1	5	3.7	1.27	-.58	-.74
Years in Education		582	69.9	1	4	2.3	.90	-.66	.27
Years in Role		582	30.1	1	5	3.2	1.50	-1.43	-1.41
Educator Agency									
	high	133	70.1						
	medium	307	29.9						
	low	118							
Gender			6.2						
	Female	407	24.1						
	Male	175	34.9						
Role			21.6						
	Teacher	407*	13.2						
	Admin.	174							
Age (years)									
	<30	36							
	30-39	140							
	40-49	203							
	50-59	126							
	>60	77							

Note. N (listwise) = 586 *The same number of females and teachers is a coincidence.

Factor Analysis

Previous research has found that the survey items being used in this study to measure the specific constructs of resiliency, mindfulness, and job satisfaction have been validated and are reliable (Brayfield & Roth, 1951; Campbell-Sills & Stein, 2007; Connor & Davidson, 2003; Locke, 1969; Ryan & Deci, 2000). However, using CFA in SEM, especially when paired with other variable modeling techniques in EFA (techniques not used in the referenced studies), allows for the creation of even stronger measurement models with which to test hypotheses, confirming how well the factor structure holds up against multiple subject groups (Costello & Osborne, 2005; Wu et al., 2007). If a second-order analysis model is to be run with confidence, CFA is the necessary first step (Byrne, 2016; Rindskopf & Rose, 1988). Our study confirms and refines these earlier measures among our population of educators, and then creates a new construct which builds upon them.

Confirmatory Factor Analysis of Resiliency. For the twenty-five items purporting to measure resiliency, Connor & Davidson's (2003) research suggested a five-factor model representing 1) "personal competence, high standards, and tenacity," 2) "trust in one's instincts, tolerance of negative affect, and strengthening effects of stress," 3) "positive acceptance of change and secure relationships," 4) "control," and 5) "spiritual influences" (p. 89). These five latent factors were indeed identified in our

own measurement model, and the items associated with each factor were linked to the appropriate factor. As the resiliency section of our survey contained no missing data, modification indices could be calculated in AMOS using ML.

Decisions were made after each trial to assure better fit. All items with regression weights <.51 were eliminated from the model. The measurement model displayed in Figure 1 represents an optimal five-factor final model of resiliency with eight of the original twenty-five questions removed.

As none of the items loading onto the factors of Control and Spirituality had regression weights less than .58, all three Control Factor and two Spirituality Factor items remained true in the final model. Where two variables loading on the same factor demonstrated high multicollinearity, error terms were co-varied. In this case, the items with the co-varied error terms shared wording and concepts that seem to be capturing one's ability to persevere through obstacles (R11 and R12).

Our final confirmatory Five-Factor resiliency model had strong fit indices: χ^2=230.303/(p<.001)/df=108, CMIN/DF=2.132, CFI=.960, NFI=.957, RMSEA=.043 (90% CI=0.037-0.052), PClose=.938, SRMR=.0353. Based on a CFI difference test (Cheung & Resnvold, 2002), our final, more economical model was significantly stronger than the original 25-item resiliency Scale.

Table 2
Bivariate Correlations among Study Variables using AMOS Maximum Likelihood

Variables	Res	Mind	JS	Gen	Age	Role	Yrs Role	Tot Yrs	SES	Agency on School Culture
Resiliency										
Mindfulness	.376***									
Job Satisfaction	.212***	.109**								
Gender (0=male, 1=female)	.029	-.077	.035							
Age	.213***	.183***	-.024	-.056						
Role (0=teacher, 1=admin)	.161***	.139***	.013	-.145***	.159***					
Years in Role	.084*	.111**	.016	-.059	.482***	-.275***				
Total Years in Ed	.217***	.151***	.074	-.042	.722***	.227***	.485***			
SES of school (0=in need, 1=affluent)	-.057	.027	-.005	-.077	.036	-.205***	.149***	-.009		
Educator Agency (0=high, 1=low)	.151***	.105*	.218***	.078	.059*	.225***	-.084*	.110**	.104**	
Invicti Anima	.817***	.547***	.460***	-.103*	.330***	.241***	.148**	.290***	-.028	.190***

Note. N = 630.

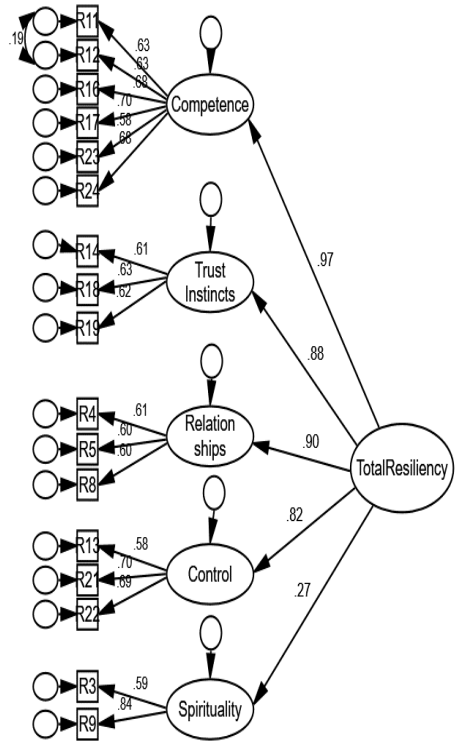
***p< .001. **p< .01. *p< .05.

A Second-Order Factor Analysis of Resiliency

Our streamlined 17-item resiliency model shows strong evidence that the factors of personal competence, trusting instincts/autonomy, relationships, and control are strong integral components of a second-order factor of total resiliency, with spirituality (.27) somewhat less so (χ^2=251.890/(p<.001)/df=113, CMIN/DF=2.229, CFI=.955, NFI=.922, RMSEA=.045(90% CI=0.037-0.052), PClose=.881, SRMR=.0387). Appendix 1 includes the 17 resiliency items

retained in the final model.

Figure 1
Second-Order Factor Construct of Resiliency



Note. Fit Indices: χ^2=251.890/(*p*=.000)/*df*=113, CMIN/DF=2.229, CFI=.955, NFI=.922, RMSEA=.045 (90% CI=0.037-0.052), PClose=.881, SRMR=.0387

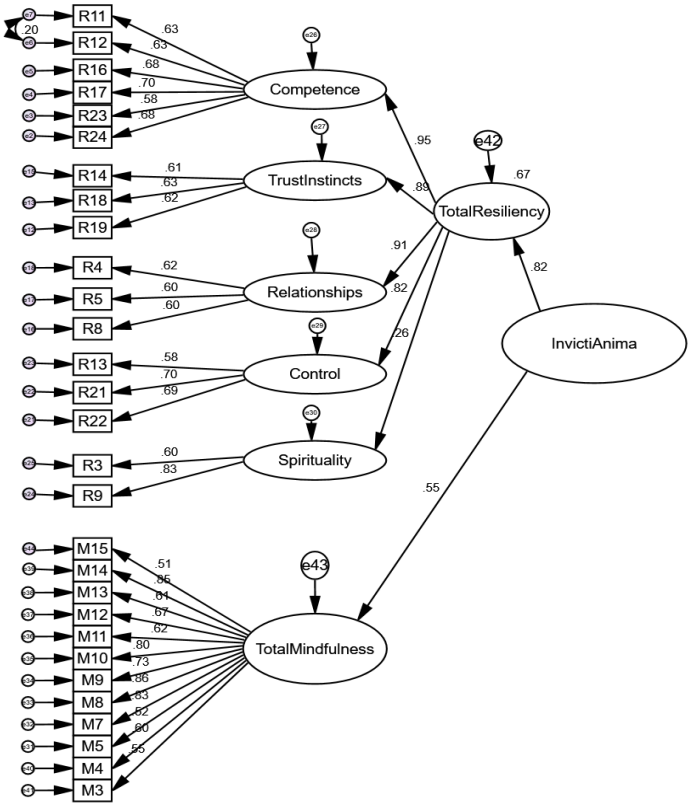
Confirmatory Factor Analysis of Mindfulness. As there were missing data from the mindfulness section of our full survey (n=599), modification indices and SRMR could not be calculated. In our SEM CFA we removed the three items with standardized regression weights less than .50 (see item loadings in bottom half of figure 2). The Confirmatory Single-Factor Model for mindfulness with those items removed indicates a good-fitting model: χ^2=214.44/(*p*<.001)/*df*=54, CMIN/DF=3.97, CFI=.954, NFI=.940, RMSEA=.069(90%CI=.060-.079), PClose=.001. Both a Chi-Square Difference Test and a change in CFI values indicate a significantly better 12-item than 15-item model. (See Appendix 1 for the 12 retained mindfulness items.)

Confirmatory Factor Analysis of Job Satisfaction. As was the case with the mindfulness construct, modification indices and SRMR could not be calculated doing the CFA with the job satisfaction measure due to missing cases. With a low factor loading (β=.34), JSI3 "Each day of work seems like it will never end" was cut. This item might actually be a better indicator of the length of the workday than a value statement about job satisfaction. (See final path model factor loadings on the right side of Figure 3 and in Table 4.) Though the fit indices for the original 5-item model were good, the four-

item model was significantly better based on both chi-square and CFI differences tests (χ2=18.84/(p<.001)/df=2, CMIN/DF=9.421, CFI=.985, NFI=.984, RMSEA=.117(90%CI= 072-168), PClose=.008). The RMSEA value was admittedly large, which is likely an artifact of a small chi-square value in conjunction with low DF (Kenny et al., 2015).

Figure 2

Invicti Anima as Construct Comprised of the Second-Order Factor of Resiliency and the First-Order Factor of Mindfulness



Note. Fit Indices: χ^2=829.51, *p*<.001, *df*=370, CMIN/DF=2.24, NFI=.886, CFI=.933, RMSEA=.045 (90%CI=.041-.049), Pclose=.981.

Measurement Invariance Testing of Resiliency, Mindfulness and Job Satisfaction

Goodness-of-fit indices suggest that on the configural level, the factors of resiliency, mindfulness, and job satisfaction are strongly invariant for role (administrator/teacher) and for gender (male/female). Strong configural invariance reveals that across groups, the same model structures are working in a similar way (Cheung & Rensvold, 2002).

The next level, metric (weak factorial) invariance, is arguably a prerequisite for quantitative comparisons (Steinmetz, et al., 2009). Based on ΔCFI across groups, gender and role are invariant at the metric level among all our refined factors of resiliency, mindfulness, and job satisfaction. Based on ΔCFI, we also have evidence for scalar (strong factorial) invariant models across role and gender for these same factors. In sum, at the configural, metric and scalar levels, the constructs being studied (resiliency,

mindfulness, and job satisfaction) were found to be invariant across Roles and Gender (detailed metrics available upon request of the authors). In essence, these three factors have the same meaning to the differing categories of educators, and to those identifying as male and female.

Measurement Model of the Second-Order Factor of Invicti Anima

Using our refined second-order factor of resiliency and the first-order factor of mindfulness, a measurement model representing the synergistic construct we term "invicti anima" was created. When constructs are related but distinct, as resiliency and mindfulness are purported to be, a higher order latent factor is likely to emerge (Chen et al., 2005). As can be seen in Figure 2, with the sole exception of NFI, the fit indices (χ^2=829.51, p<.001, df=343, CMIN/DF=2.24, NFI=.886, CFI=.933, RMSEA=.045 (90%CI=.041-.049), Pclose=.981) provide good support for the notion of a higher-order factor comprised of the second-order factor of resiliency (β = .82) and the first-order factor of mindfulness (β = .55), with resiliency playing the more important role. In summary, we have evidence to suggest that resiliency and mindfulness traits come together synergistically in a broader mental construct which is superior to either subordinate factor.

Additional evidence for a synergistic higher-order factor can be seen in Table 2: The magnitude of the correlation between invicti anima and job satisfaction (r=.460), is significantly larger than the correlation between resiliency and job satisfaction (r=.212, z=11.06, p<.00001) and mindfulness and job satisfaction (r=.109, z=.9.5, p<00001). (We used an SPSS syntax file for testing correlational differences available at https://www.ibm.com/support/pages/testing-differences-between-dependent-correlations, and suggestions for how to run these tests from Gignac (2019)). Thus, we have both correlational and multivariate evidence to substantiate a synergistic relationship between resiliency and mindfulness, which combine in a construct (invicti anima) that is significantly and substantively more highly associated with job satisfaction than either factor is alone—indeed, much higher.

Invariance testing revealed that the configural model for invicti anima was reasonably invariant by educator role (NFI=.828, CFI=.919 and RMSEA=.038 (90%CI=.032-.038)). Additionally, based on the CFI change test, invicti anima demonstrated metric invariance, but not scalar invariance, by role. Invicti anima also demonstrated reasonable configural invariance by gender (NFI=.832, CFI=.924, RMSEA=.034 (90%CI=.031-.038), and based on the CFI change test, demonstrated the more important metric invariance by gender, but not scalar invariance.

Influence of Invicti Anima on Job Satisfaction

In our attempt to create an optimal path model depicting the association of invicti anima with job satisfaction, we entered all of the control variables, removing and reinserting them, and constantly comparing changing fit indices and regression weights until we had the best fitting structural model. Figure 3 represents our optimal results, which retained the two most important extraneous variables of interest, Role and Agency. As can be seen, the fit indices for the overall structural model are generally good, though the NFI indicates a poor fit. However, the CFI indicates acceptable model fit, and the RMSEA and CMIN/DF show a good fit (χ^2=1228.35, p<.001, df=551, CMIN/DF=2.23, NFI=.863, CFI=.919, RMSEA=.045 (90%CI=.041-.048)). Importantly, gender, SES of school, age, years in education, and years in present role were ultimately eliminated as insignificant and unimportant controls in our final structural model: they are simply unrelated to job satisfaction, *ceteris paribus*. All final factor

loadings are included in both Figure 3, and for clarity of viewing, Table 4 as well.

Table 3 presents three hierarchical models in increasing order of complexity, with the Model 1 showing only the association of invicti anima on job satisfaction, and model three showing the fully specified model with the two controls entered. Standardized effect (β) coefficients are reported. As seen in Model 1, Invicti anima has a robust, moderate unique effect of β=.395 on total job satisfaction. Invicti anima is responsible for 15.6% of the variance of job satisfaction before controls are entered.

Table 3

Structural Models of Invicti Anima's Effect on Job Satisfaction with Controls Added

	Model 1 β	Model 2 β	Model 3 β
Invicti Anima	.395***	.406***	.376***
Role (0=teacher, 1=admin)		-.055	-.113**
Agency on School Culture			.279***
R-squared	.156***	.168***	.217***

Note. N = 618.

***p< .001. **p< .01.

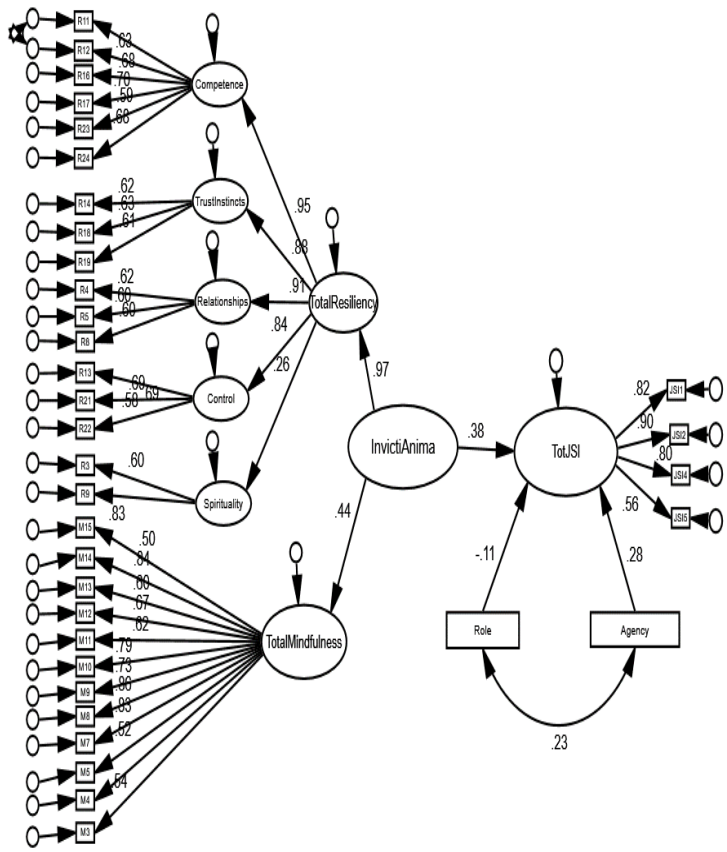
Role was entered in model 2, and as can be seen, has a non-significant effect on job satisfaction (no difference in levels of satisfaction between teachers and other educational professionals compared to school leaders). However, when Educator Agency is entered in model 3, the effect of role on job satisfaction doubles and becomes significant (β= -.113, p<.01), though small: educational leaders are less satisfied.

The subject's perceived agency on school culture as assessed by the extent to which subjects perceived their voice was heard and their opinions mattered has a unique, statistically significant and moderate effect on job satisfaction (β=.279, p<.001). Perceived agency on school culture had an effect size second only to the effect of invicti anima on job satisfaction. In other words, independent of their level of invicti anima, the degree to which subjects felt their voice was being heard in their schools had a stronger effect on job satisfaction than did gender, role, age, years in education or the perceived socioeconomic status of the school.

Interestingly, the predictor variable of perceived agency on school culture acted as a suppressor variable, enhancing or improving the relationship that role had on job satisfaction (see Pandey & Elliott, 2010, for a discussion of suppressor effects). As can be seen from model 2 to model 3, role became significant only after perceived agency on school culture was controlled for. This indicates that though in the bivariate analysis administrators indicate having more Agency than teachers/other professionals (r=.224, p<.001), when controlling for this fact, administrators, who initially report no difference in job satisfaction from teachers (r=.013), are actually more dissatisfied with their job than teachers are. That the variable Agency may be moderating some of the relationship between invicti anima and job satisfaction is evident in the decrease of the effect size of invicti anima from model 2 (β=.403) to model 3 (β=.376).

Figure 3

Structural Model of Association Between Invicti Anima and Job Satisfaction with Controls



Note. Fit Indices: χ^2=1228.35, *p*<.001, *df*=551, CMIN/DF=2.23, CFI=.919, NFI=.863, RMSEA=.045 (90%CI=.041-.048).

Finally, we tested a structural model where resiliency and mindfulness were independent factors predicting total job satisfaction, controlling for role and agency. All of the fit indices were worse than our final structural model which incorporated these factors in our higher-order invicti anima model, with a chi-square difference test indicating a statistically significantly worse model (but not the CFI difference test). Thus, we have additional evidence supporting both the validity of our invicti anima construct, and our claim that resiliency and mindfulness combine in a synergistic fashion to create a mental construct greater than either of the two separately.

Summary of Results

In sum, invicti anima has a statistically significant and meaningfully important association with educator job satisfaction, regardless of the educator's role or sense of agency in their school. The portion of variance of job satisfaction accounted for by invicti anima, educator role and educator sense of agency was a hefty 21% (R^2=.217). It is important to emphasize that the relationship between invicti anima and job satisfaction is not moderated by gender or perceived socioeconomic status of one's school (thus, one cannot say that being in a lower SES school accounts for significantly lower job satisfaction, once invicti

anima is factored in). We do have to acknowledge that we cannot confidently determine the direction of causalit, or rule out that job satisfaction could potentially also be influencing one's level of invicti anima.

Evidence for the synergistic combination of the resiliency and mindfulness measures is evident in the stronger relationship between invicti anima and job satisfaction even after controlling for the other important covariates (β=.376), compared to the much smaller bivariate relationships between job satisfaction and resiliency (*r*=.212), and job satisfaction and mindfulness (*r*=.109). The variable "sense of educator agency on school culture" also has a significant unique association with job satisfaction, and along with invicti anima, contributes to our understanding of the causes of job satisfaction among this large sample of educators in the northeastern United States. Importantly, though, invicti anima remains the much more important determinant of job satisfaction, even when factoring in the lack of agency educators might feel in their schools.

Table 4

Total Resiliency, Mindfulness, and Job Satisfaction Index Standardized Factor Loadings (Betas) in Final SEM Path Model

	Total Resiliency	*Mindfulness*	*Job Satisfaction Index*
Competence	.947		
R11=.632		M15=501	JSI1=.817
R12=.627		M14=.844	JSI2=.900
R16=.680		M13=.603	JSI4=.798
R17=.705		M12=.668	JSI5=.564
R23=.585		M11=.619	
R24=.681		M10=.794	
Trust Instincts	.882	M9=.725	
R14=.617		M8=.856	
R18=.632		M7=.828	
R19=.615		M5=.501	
Relationships	.912	M4=.596	
R4=.617		M3=.544	
R5=.597			
R8=.602			
Control	.837		
R13=.579			
R21=.694			
R22=.692			
Spirituality	.263		
R3=.601			
R9=.831			

Discussion, Conclusions, and Implications

In the context of understanding how the resiliency and mindfulness of educators relates to their job satisfaction, our study set out to answer a series of research questions among a sample of teachers and

school leaders in the northeastern U.S., including: 1) whether two traditional measures of resiliency and mindfulness were validated constructs, 2) whether these distinct validated constructs combined to form a second-order factor we have labeled as invicti anima, 3) whether invicti anima was associated with these educators' level of job satisfaction, 4) whether educator role or sense of agency at work moderated the relationship between invicti anima and job satisfaction, and 5), whether the structural model with invicti anima explained educator job satisfaction better than a model which included resiliency and mindfulness as separate factors (establishing synergism). We were able to answer all our research questions in the affirmative. To reiterate our most important finding: invicti anima has a statistically significant and meaningfully important association with educator job satisfaction, regardless of the educator's role or sense of agency in their school.

Our research findings have relevance in light of the large number of American teachers and educational leaders who are in jeopardy of becoming overwhelmed, burning out, and leaving the profession. The turnover rates among teachers and school leaders are among the highest of any profession, due in part to the stressful and multifaceted natures of their complex and often ill-defined jobs. This is especially true during these turbulent political times which find school professionals caught in the crossfire of diametrically opposed ideological camps who have turned schools into battlegrounds of the culture wars. The COVID-19 pandemic caused upheaval in many school districts, likely exacerbating the levels of stress already associated with being an educator.

These societally indispensable professionals are tasked with not only educating youth in academics, but also with ensuring their social and emotional development. If educational professionals are ill-prepared themselves to adjust, much less thrive, in the stressful pressure cooker environments of modern-day schools, then they are poor role models for youth who need to see calm, control, and compassion at the head of the classroom and at the head of their school building. Moreover, these ill-prepared professionals are likely to be fleeting and transient presences in the lives of children who need continuity and stability.

Teachers who report low levels of job satisfaction are less effective in the classroom and experience stress and burnout at a greater intensity than peers reporting higher self-efficacy (Caprara et al., 2003; Collie et al., 2012; Ronfeldt et al., 2013). On the other hand, research shows that teachers who are satisfied and empowered at work and who feel they are having a positive impact on student learning are less likely to leave their jobs; they are more likely to report feelings of high morale, and as such, remain in their teaching roles even when facing stress-inducing environmental challenges such as working in schools in high poverty districts (Ronfeldt et al., 2013). Indeed, educators with a stress-mindset are more likely to remain on the job (Kim et al., 2020). Importantly, our study also shows that even when educators may not feel agency in their schools, if they are high in invicti anima, they still derive satisfaction from their work. This is true regardless of the affluency of their schools.

It is important to pay attention to the social and emotional well-being, as well as the job satisfaction, of the adults who are serving as role models and interact and connect with students daily (Brackett et al., 2010; Dewey, 1916; Kohlberg, 1975). Students feel connected to their school to the extent that adults in their building know them and care for their wellbeing (McNeely, et al., 2002; Cohen, 2014; Osterman, 2000). To summarize the research findings from the Aspen Institute (2018) report, "Children learn best when we treat them as human beings, with social and emotional as well as academic needs" (p. 5). David Brooks (2019) summarized the research in this area even more succinctly: "Students learn from people they love." Students are much more likely to look up to and love educators who demonstrate an optimal combination of resilient and mindful behavior, which would include 1) simply remaining engaged with students over an extended period of time, and 2) displaying

nonjudgmental empathetic and compassionate behavior towards students and their fellow professionals.

We have demonstrated that educational leaders and teachers who exhibit high levels of resiliency and mindfulness in a synergistic construct we term invicti anima are indeed much more likely to both be satisfied at their jobs, and remain in the field of education longer. The stability and centeredness of these adults creates the atmosphere necessary for students to develop the close connections essential to their social and emotional development (Centers for Disease Control and Prevention [CDC], 2009), not to mention contribute to an overall healthier school environment that also benefits the adults with whom these wise individuals interact.

We have empirically confirmed invicti anima as a stand-alone singularity that has a similar meaning across both gender and educator roles. Moreover, we demonstrated that invicti anima is positively and substantively associated with job satisfaction independent of one's educator role, years of experience, gender, one's sense of agency within the school environment, or the socioeconomic status of the school. This relationship is much larger than the bivariate relationships between job satisfaction on the one hand, and resiliency and mindfulness on the other. In short, we have identified a mindset that may be particularly impervious to stress and may indeed enable the educator high in invicti anima to thrive in the stressful school environments where other teachers and school leaders wilt, crumble—and then leave.

Perceived agency on school culture emerged as an important moderating variable, contributing to job satisfaction more than any other variable except invicti anima. Given the chanages in the current educational landscape, it would appear from this research that giving voice to teachers and administrators in the way their schools are run and the manner in which decisions are made will lead to schools with more satisfied teachers and leaders.

Nevertheless, we have shown that even when taking into consideration the educator's sense of agency (or lack thereof) into how their school is being operated, those educators strong in invicti anima still manage to find the means through a combination of resiliency and mindfulness to achieve a level of satisfaction in their stressful school environments. It is these educators who are in the best position to connect with students, whether they come from impoverished or privileged backgrounds, and help them in their quest to navigate life's stressors and focus on the present moment.

An important implication of our study is the need to train school leaders and teachers the proven techniques necessary to develop resiliency and mindfulness on the job. The research is clear that resilient and mindful attitudes can be taught, and that those who are taught these skills show many positive outcomes (Davis & Hayes, 2011; Frank et al., 2015) including reduced stress (Cahn & Polich, 2006; Crum et al., 2013; Davidson et al., 2003; Kim et al., 2020; Neumann & Tillott, 2022) and decreased job turnover (Kim et al., 2020). In addition to adult well-being, a focus on social and emotional learning in schools has been shown to have a positive impact on student graduation rate as discussed in a recent meta-analysis of SEL programs (Taylor et al., 2017). An earlier research study (2011) conducted by Durlak and colleagues supported an 11-percentile point academic gain among students in K-12 in SEL-focused educational programs (Durlak, et al., 2011). Understandably, with so many SEL programs to choose from, teachers and educational leaders may be wise to select a research-based curriculum. The Collaborative for Social and Emotional Learning, CASEL, has an extensive online school guide (found at https://schoolguide.casel.org) designed to compare SEL programs and match school goals to the best SEL curriculum.

There are limits to what can be accomplished in the educational policy arena to reduce the stressful nature of the educational environment. There are many factors beyond the control of both educators

and policymakers. Moreover, it is not realistic to expect that the multifaceted job demands of teachers and school leaders will decrease. If anything, the social and emotional needs of students will increase, and the research is clear that these needs must be met first before any meaningful academic learning can take place.

Along with Neumann & Tillott (2022), we advocate for more mindfulness-resiliency training within schools of education preparing pre-service educators, as well as similar training to practicing educators already in the field. Research has demonstrated that educators who practice mindfulness-based stress reduction techniques show significantly improved affective outcomes, including self-regulation and self-compassion (Frank et al., 2015). Developing these and other essential traits in educators will not only enable them to survive in stressful school environments, but to thrive and derive satisfaction from the critical work of effectively educating our youth.

Of course, no empirical study is perfect. Ours had important limitations including being confined to one specific region in the United States (thus potentially limiting generalizability), a non-random sample of respondents some of whom may have self-selected based on a systematic bias, and no way to confirm that respondents in our sample were who they said they were. We may also have inadvertently excluded individuals who did not identify as either "male" or "female." Additionally, our study was cross-sectional and quantitative. We recommend that a study similar to ours be conducted longitudinally, which is a methodology more suited to generating results from which causal inferences can be made. Also, qualitative research techniques such as observations, interviews and focus groups could help flesh out in more detail and with greater clarity the linkages we have established quantitatively. Indeed, we hope that further research with a broader set of tools will continue our line of research where we have left off.

Declaration of Conflicting Interests

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