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ORIGINAL RESEARCH

# Shifting from "What's Wrong" to "What's Strong": Developing a Trauma-Informed Assessment of Student Character Strength Usage

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**Abstract**
In the United States, approximately two-thirds of children will be exposed to a traumatic event by the age of 16. Experiencing trauma can impact domains of positive development that may affect functioning at school. These challenges can alter learning and lead students to require a comprehensive psychoeducational assessment to determine if additional services are necessary in the school setting. Common assessment practices are often deficit-based and do not provide insights into areas of strength. Though strengths-based assessments exist, they lack a key component of strengths, character strengths. Character strengths provide insight into pathways that can foster well-being, positive relationships, and academic success. This study aimed to develop a trauma-informed assessment of student character strength usage, a teacher report, for use with primary through secondary students to examine a student's character strength usage at school. A mixed methods design was used, including a comprehensive literature review, focus group with educators, expert feedback, cognitive interviews with teachers, and a pilot study. The final Character Strengths Usage Profile for Students (CSUP-S) version consisted of 33 items measuring 11 character strengths identified best to assess student character strength usage from a trauma-informed lens. The preliminary validation sample consisted of 47 K-12 general education teachers who completed several surveys for a subset of students ($n=221$) who represented 14 school districts in the United States. A CFA was tested on a first- and second-order model, with the first-order model exhibiting an acceptable fit. Findings suggest the CSUP-S demonstrates an adequate first step toward demonstrating evidence of content validity and construct validity. Several considerations for the next steps in instrument development are provided.

**Keywords** Character strengths · Strengths-based assessment · Positive psychology · Positive education · Trauma-informed

## Understanding Childhood Trauma and Stress

Approximately two-thirds of children in the United States will be exposed to a traumatic event by the age of 16 (National Child Traumatic Stress Network, 2020). Brunzell and colleagues (2015) describe trauma as an "overwhelming experience that can forever alter one's belief that the world is good and safe" (p. 3), and, over time, trauma can damage critical psychological and neurological systems. Not all traumatic experiences elicit the same outcomes for an individual (National Child Traumatic Stress Network, 2020), and trauma does not discriminate in terms of whom it may impact, affecting individuals regardless of socioeconomic status, gender, race, and ethnic identity (Felitti et al., 1998). Therefore, it is important to contextualize types of traumas

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and adverse childhood experiences (ACEs; Petruccelli et al., 2019): acute, chronic, complex, and developmental; and understand how trauma impacts a student as a learner and their social, emotional, and behavioral functioning.

In examining types of traumas, acute trauma may occur after a single highly distressing event, such as a natural disaster, accident, sexual assault, school shooting, or medical procedure (Grotberg, 1996; Saltzman, 2016; Zins & Elias, 2006). Chronic trauma refers to exposure to prolonged periods of distressing events or incidents that may occur over a long period of time, such as a long-term illness, neglect, physical abuse, emotional abuse, sexual abuse, or repeated surgical procedures. These chronic experiences are often committed by an adult known to the child over time (Streeck-Fischer & van der Kolk, 2000). Complex trauma, then, refers to exposure to maltreatment that is often relational, which can also include emotional, physical, and sexual abuse, as well as witnessing domestic violence (Cook et al., 2005). Lastly, developmental trauma refers to traumatic experiences that begin early in life and occur throughout the individual's lifetime that often involve victimization and disrupted attachment that is so significant the experience impacts a child's neurodevelopment and can then impact the child throughout their life (Spinazzola et al., 2018).

Children undergo significant biological, social, and psychological developmental changes throughout childhood and adolescence (Barrett et al., 2014). Of these, attachment, sense of security, and formation of self are most critical during early childhood development, and when exposed to trauma and adversity, children may become vulnerable to adverse outcomes (Hamiel et al., 2013). Additionally, children of trauma can have a stress response system that is continuously activated (National Scientific Council on the Developing Child, 2014), meaning children can be in a relatively constant state of fight, fight, or freeze (Thompson et al., 2014). Emotional upset and reactivity, stress, blind rage, negative self-talk, and unsociability are just some of the outcomes that potentially contribute to the child's susceptibility to maladaptive behavior (Prince-Embury, 2014), as well as demonstrations of poor self-control and difficulty forming healthy relationships (van der Kolk, 2003).

Children face incredible adversities, and the impact can be grave. Students in classrooms around the United States are contending with issues of gender identity, spontaneous terrorist attacks, disputes over personal choice, human rights, racial discrimination, civil liberties, issues of freedom (Center for Disease Control and Prevention, 2022; Luciw, 2024; Zins & Elias, 2006), and navigating the aftermath of a global pandemic that led to deaths, school closures, and isolation (Elharake et al., 2022). Further, adversity can encompass everyday occurrences, including divorce, moving, military deployment, and loss of a job (Grotberg, 1996; Saltzman, 2016), leading to experiences of toxic stress (Franke, 2014). Trauma and overexposure to adversity can lead to behavioral issues, inhibited academic performance, poor judgment, aggression, truancy, delinquency, and death by suicide (Allen et al., 2016; Ghali, 2014; Prince-Embury, 2014; Zins & Elias, 2006). Most recently, the COVID-19 pandemic has impacted millions of children with significant increases in feelings of anxiety, depression, fatigue, and overall distress (Elharake et al., 2022), and increased exposure to racism and xenophobia in addition to increasing inequities for children (e.g., access to healthcare, food insecurity, child maltreatment, access to education; Oberg et al., 2022). These impacts have disproportionately affected individuals from low-income populations, rural areas (Elharake et al., 2022), children from Black, Latine, Indigenous, and refugee or immigrant communities, LGBTQIA+youth, and children with disabilities (Oberg et al., 2022). Furthermore, symptoms of trauma can develop into clinical diagnoses such as attention deficit hyperactivity disorder, conduct disorder, oppositional defiant disorder, posttraumatic stress disorder (Allen et al., 2016; Brunzell et al., 2015a, b; Cook et al., 2005; Oberg et al., 2022), depression, anxiety (Cook et al., 2005; Oberg et al., 2022), attachment-related disorders (e.g., reactive attachment disorder), eating disorders, and communication disorders (Cook et al., 2005).

Inevitably, these challenges filter into the classroom as well. Forming relationships and being able to control oneself are foundational and critical components to success at school (Brunzell et al., 2016) and can be observed through the following developmental areas that can be negatively impacted by trauma: (a) attachment: social isolation, problems with boundaries, and difficulty with perspective taking; (b) affect regulation: difficulty communicating needs and desires, difficulty with both labeling and regulating emotions, and knowing and describing bodily sensations and states related to affect; (c) behavioral control: excessive compliance, poor self-control of impulses, and aggression toward others; and (d) cognition: difficulty regulating attention and executive functions, difficulty with information processing, and lack of curiosity (Cook et al., 2005; van der Kolk, 2003). These domains can be fostered through healthy relationships and modeling of regulation and self-control, specifically with teaching personnel (Brunzell et al., 2019). Students who have experienced trauma may still require professional clinical support, yet schools can play an important role in the healing process. Additionally, students who have experienced trauma are more likely to have poor school attendance and have difficulty meeting mathematics, reading, and writing grade-level standards (Blodgett & Lanigan, 2018), potentially leading to a further diminished self-concept (Cook et al., 2005).

As the literature suggests, students who have experienced trauma appear to be confronted with significant challenges that can interfere with learning, relationships, and positive development. However, the literature cited above does not adequately focus exploration on the inherent character strengths that all children possess. Instead, current assessment practices in general, and schools specifically, aim to find evidence of pathology as a means to identify, label, and fix a child's deficits.

## Assessment in Schools

Although operating from the standpoint of aiding students and their families to design comprehensive programming, psychoeducational assessment practices unfortunately have deficit-focused roots (Epstein, 1998). In schools, assessment practices are generally used to identify and target academic and behavioral areas that need remediation and to then diagnose or determine eligibility for special education services (Climie & Henley, 2016; Epstein, 1998; Nickerson & Fishman, 2013). This process can often guide assessments to focus on student deficits. Fortunately, there is an assessment practice that can be leveraged to empower students and support social and emotional well-being (LeBuffe & Shapiro, 2004) – strengths-based assessment (Epstein, 1998).

The aim of strengths-based assessment is to provide a holistic view of student functioning to support the decision-making process about a child (Climie & Mastoras, 2015; Reid et al., 2000). Utilizing a strengths-based approach has been shown to promote mental health and resilience (Climie & Mastoras, 2015; Nickerson & Fishman, 2013), promote social, emotional, and academic development (Epstein & Sharma, 1997), improve treatment compliance and motivation to continue services (Cox, 2006; Nickerson & Fishman, 2013) by fostering hope and optimism (Climie & Henley, 2016), improve school climate (Tschannen-Moran & Tschannen-Moran, 2011), build learning capacity (Climie & Mastoras, 2015), foster and strengthen relationships (Lopez & Louis, 2009), provide insight on how to authentically encourage and cultivate engagement (Rashid & Ostermann, 2009), capture a student's unique abilities (Laija-Rodriguez et al., 2013), provide a balanced view of a student to include internal and external areas of strength and competence (Climie & Henley, 2016), and can aid in creating alternative hypotheses regarding psychopathology (e.g., depression may not just be a collection of symptoms as noted in the DSM-V-TR, but perhaps a dearth of positive emotions or meaning in the students life; Rashid & Ostermann, 2009). With this, it is incredibly important to state that the struggles and challenges of students should never be minimized nor ignored; rather, a strengths-based approach should complement the challenges uncovered during an assessment.

Traditionally, strength-based assessments use standardized rating scales to examine domains of strength related to interpersonal (e.g., peer and family relationships, attachment), intrapersonal (e.g., emotional and behavioral self-control, personal responsibility), and school functioning (e.g., engagement, success in school; Nickerson & Fishman, 2013). To further complement the current assessments a tool that measures character strengths would further bolster strengths-based offerings for schools. Character strengths are differentiated from strength areas of skill, talent, and natural ability and from strength domains in that character strengths are positive personality traits of moral value that can provide an individual with meaning, purpose, and a sense of identity (Park et al., 2004). Additionally, research is lacking on the efficacy of using strengths-based measures to assess growth over time (Nickerson & Fishman, 2013). Furthermore, most strengths-based assessments measure domains and areas of competence at the macro level, which does not provide insights into discrete and meaningful components of strength-related skills (Cipriano et al., 2023; Ng et al., 2022). Gaps in strengths-based assessment can be alleviated through the inclusion of measuring student character strength usage and by developing a tool that captures growth.

## VIA Character Strengths

Character strengths are positive personality traits that are reflected in thoughts, feelings, and behaviors, can be developed (Niemiec & Pearce, 2021; Peterson & Seligman, 2004), and are of moral value (Peterson & Seligman, 2004; Stahlmann & Ruch, 2020). Through people's actions and intentions, character strengths influence interpersonal relationships, self-regulatory capacities, cognition, and problem-solving (Character Lab, n.d.). Though there have been many character strengths noted throughout research and history, the focus and character strength classification system used for this paper will be the VIA Classification due to its comprehensive classification system and wealth of empirical evidence (Peterson & Seligman, 2004). The VIA character strengths are a collection of universally prevalent traits (McGrath, 2015; Park et al., 2006) that reflect what is best in human beings and support human beings in fostering positive outcomes (Niemiec & Pearce, 2021), leading to "optimal development across the lifespan" (Park, 2004, p. 2). Character strengths provide the pathways for the positive results educators wish to see in the classroom that can inform intervention planning (Lavy, 2020; Niemiec & Pearce, 2021).

## Character Strengths at School

Schools often focus on skills and abilities associated with academic achievement yet lose sight of the personality characteristics of individual students that support them to thrive at school (Park & Peterson, 2009). Character strengths are associated with positive youth development (Park, 2004; Park & Peterson, 2006a) and can be used to predict outcomes in school achievement, interpersonal relationship quality, and classroom engagement (Park et al., 2017). Research on character strengths and students reveals that higher levels of character strength usage are related to well-being (i.e., intrapersonal strengths; Park & Peterson, 2009; Tang et al., 2019), positive relationships (i.e., interpersonal strengths; Park et al., 2017; Wagner, 2019), and academic achievement (i.e., intellectual strengths; Park, 2004; Park et al., 2017; Wagner & Ruch, 2015; Wagner et al., 2020), all of which can be developed through character strength interventions (Haslip et al., 2019; Lavy, 2020; Linkins et al., 2015; Quinlan et al., 2019), used to problem solve and resolve challenges (Haslip & Donaldson, 2021), and implemented to support schools at the organizational level (White & Waters, 2015).

## Character Strengths and Trauma

What strengths should we analyze for students impacted by trauma? To answer this question, a synthesis of the research on trauma and character strengths usage is needed. For this, we look to character strength research for opportunities to foster additional pathways that can lead to well-being, positive relationships, and academic success. Students who have endured ACEs (e.g., toxic stress and acute, chronic, complex, developmental trauma) can have neurodevelopmental effects that continue to impact students throughout their lives. ACEs can have continuous effects on the neuroimmune, neuroendocrine, autonomic, and central nervous systems and can delay the typical sequential development of the brain through the brainstem, midbrain, and then neocortex (Perry, 2006). The brains of trauma-affected students may be chronologically one age yet performing at a much lower developmental stage (Perry, 2006). This developmental delay impacts the student's ability to regulate behaviors and emotions, foster healthy relationships, engage in and retain learning, and see good within themselves (Brunzell et al., 2016; van der Kolk, 2003).

Research findings also suggest the treatment framework of Attachment, Self-regulation, and Competency (ARC) is most effective in supporting positive development in children of trauma by addressing the vulnerabilities of attachment, self-regulation, and developmental competencies (Kinniburgh et al., 2005). Similar to the functions of character strengths, the ARC framework can be utilized as the pathway to both healing and well-being. In this way, the ARC framework aligns with character strengths. Attachment aligns with strengths of relationship (love, kindness, and social intelligence), self-regulation aligns with strengths of self-control (forgiveness, prudence, and self-regulation) and action (perseverance). These components can provide insights into where an individual needs support or growth and identify areas of strength to leverage.

Lastly, character strength research is examined to understand additional pathways that can support well-being, positive relationships, and academic success. Not surprisingly, the strengths of relationships (love, kindness, and social intelligence) contribute to and predict positive and healthy relationships (Wagner, 2019), making these three strengths important to nourish healthy attachments with others. The literature on trauma and character strengths indicates that the strengths of gratitude, hope, and perseverance are predictors of well-being and posttraumatic growth, making these three strengths key (Hamby et al., 2018). Additional research further supports the strengths of gratitude, hope, and love have also been shown to play a role in well-being (Park & Peterson, 2009) and positive relationships (Wagner & Ruch, 2015). Though not explicitly stated in the literature on both trauma and character, the character strength research suggests that forgiveness and prudence play a pivotal role in self-control and self-regulation (Peterson & Seligman, 2004) and are associated with increased levels of well-being (Casali et al., 2021) and positive relationships (García-Vázquez et al., 2020). Students who have experienced trauma can make impulsive decisions without considering the long-term impact of those choices (Prince-Embury, 2014; van der Kolk, 2003), indicating prudence and self-regulation as important character strengths to foster. Additionally, forming and sustaining relationships can be difficult for those who have experienced trauma, and the mistakes of others can quickly lead to writing off a relationship (Prince-Embury, 2014; van der Kolk, 2003), making the character strength of forgiveness important to cultivate as well. These ideas are consistent with the Trauma Informed Positive Education (TIPE) model, which has integrated and implemented many of these components.

## Conceptual Framework

The Trauma Informed Positive Education (TIPE) model synthesizes research from positive education and trauma-informed education as a basis for developmentally informed principles to support students and teacher implementation (Brunzell et al., 2016). The TIPE model utilizes explicit instruction in TIPE skills in a holistic way to support trauma-affected students' development. The model is

broken down into three domains using a developmental perspective to guide teaching in a neuro-responsive manner. In this way, strategies support the development of the lower brain and midbrain (i.e., regulation functioning, motor tasks, stress response), the limbic systems (i.e., relational system, emotional, behavioral regulation), and neocortex (i.e., cognition). The three domains of TIPE are: (a) repairing regulatory abilities, (b) repairing disrupted attachment, and (c) increasing psychological resources (Brunzell et al., 2016).

In addition to this holistic approach, the TIPE model suggests a synergistic relationship between the domains that foster healing and growth. Brunzell and colleagues (2016) theorize: "The TIPE model fundamentally expands possibilities of trauma-informed teaching and learning by maintaining rigorous attention toward the healing of developmental deficits *while simultaneously* providing pathways toward psychological growth" (p. 80). In this framework, the foundation of student growth is based on supporting students with regulation and cultivating positive relationships.

TIPE serves as the conceptual model underpinning the Berry Street Education Model in Australia (Stokes et al., 2019). TIPE domains are helpfully articulated for teachers as five developmental domains that are pertinent to child development and being ready and able to learn. These five building blocks have been given names that are practical for teachers to remember and employ: Body, Stamina, Engagement, Character, and Relationship, with Relationship at the core (Brunzell & Norrish, 2021; Stokes et al., 2019).

Each of these domains is also aligned with character strengths that can be used as pathways in supporting student development. For example, the interventions and strategies associated with the Body domain are aligned with the strengths of self-control, self-regulation, and prudence; the interventions and strategies associated with the Relationship domain are aligned with the strengths of relationship, love, kindness, and social intelligence and can support forgiveness; the strategies and interventions associated with the Stamina domain are aligned with the strengths of action, specifically perseverance; the strategies and interventions associated with the Engagement domain and their outcomes are essentially the desired outcome of fostering the character strengths of relationship, self-control, and perseverance. Once competency and confidence are fostered in each of these character strengths, the pathway to engagement at school may be opened, and the strategies and interventions associated with the Character domain are associated with each of the 24 VIA Classification of character strengths, but regarding specific strengths to support students of trauma, the strengths of transcendence, particularly hope and gratitude, are highlighted (Brunzell et al., 2015a, b; Brunzell & Norrish, 2021).

Additionally, the delineated character strengths align with the competency areas of the Collaborative for Academic, Social, and Emotional Learning (CASEL, 2020). Self-awareness, self-management, social awareness, relationship skills, and responsible decision-making are included in CASEL's Social Emotional Learning (SEL) framework. These areas are deemed necessary to "develop healthy identities, manage emotions and achieve personal and collective goals, feel and show empathy for others, establish and maintain supportive relationships, and make responsible and caring decisions" (CASEL, 2020, p. 1). It is plausible to hypothesize these outcomes can be accomplished through the pathways of character strength development.

The current research findings on character strengths, trauma, and trauma-informed positive education indicate the character strengths within the areas of strengths of relationship (love, kindness, and social intelligence), the strengths of self-control (forgiveness, prudence, and self-regulation), the strengths of meaning (hope and gratitude), and the strengths of action (perseverance) may be the best character strengths to support students who have experienced trauma and adversity.

Knowing how important character strengths are, how do we measure them?

## Current Measures of Character Strengths

Several surveys exist that have demonstrated promising results to assess the VIA Classification of character strengths in youth (e.g., VIA-Youth-1 [ages 8–12] and VIA-Youth-2 [ages 13–17; Jermann & McGrath, 2022], VIA Youth-198 an abbreviated version, VIA Youth-96 [Park & Peterson, 2006b], Character Strengths Inventory for Children [CSI-C; Shoshani & Shwartz, 2018], Character Strengths Inventory for Early Childhood [CSI-EC; Shoshani, 2019]). Each of these assessment tools is of great value and importance. Still, limitations on these measures exist, particularly regarding their use in schools. These measures are intended to identify "signature strengths" or strengths that are most like the child. They are not feasible or intended to determine character strength growth. Data-based decision-making is an important component in educational programming and interventions, which requires tools that are both easy to administer and provide meaningful evidence of progress and growth. There is an evident need for an efficient and meaningful tool to measure student character strength usage associated with healthy relationships, self-control, meaning, and action that can be used to demonstrate the effectiveness and progress of positive education strategies and interventions at school. As Niemiec (2019) asked, "How can we find fulfillment and make the most of life's opportunities as well as heal or overcome adversity and suffering without using

our character strengths?" (p. 17). One avenue in answering these questions is to examine how often students use key character strengths in the school setting to support them in growing pathways to well-being, positive relationships, and academic success.

### Character Strength Usage Profile for Students

Measuring character strength usage can help a student thrive through the development of core character strengths associated with trauma-informed positive education. Students and teachers can be provided with data on character strength usage to support effective intervention and strategy planning at both the individual and system levels. Lastly, educators need to be provided with a common language to support students through the lens of character strength usage. In short, character strengths provide a pathway to the positive outcomes educators wish to see in the classroom. Therefore, measuring the usage of character strengths related to the success of students impacted by trauma is imperative to provide insight on how to best support students to not only overcome their deficits but also to develop critical pathways to thrive. Of importance is that the character strengths included in the proposed measures may benefit all students, considering the prevalence of adverse childhood experiences (ACEs) and the recent impacts of the COVID-19 pandemic. Each of the following character strengths has been identified to promote well-being, positive relationships, and academic success, and no student is devoid of setbacks in life: love, kindness, and social intelligence (strengths of relationship), forgiveness, prudence, and self-regulation (strengths of self-control), perseverance (strength of action), hope and gratitude (strengths of meaning).

The purpose of this study was to design an instrument and to collect preliminary validity evidence for the Character Strength Usage Profile for Students (CSUP-S), a behavior rating scale designed to measure character strength usage in primary through secondary students (i.e., kindergarten through grade 12). The CSUP-S aims to add to the current strengths-based instruments and character strength instruments by making character visible (i.e., observable), and knowing that character is malleable means we can foster pertinent strengths of students and measure that growth. Character strength nomenclature from trauma-informed educational research and practice, adapted from the VIA Character Strengths (Brunzell et al., 2015a, b), is used in this study to align with current trauma-informed educational practice (e.g., referring to strengths of relationship rather than the virtue of humanity).

The specific character strengths chosen for the CSUP-S are based on a synthesis of the trauma literature (e.g., Allen et al., 2016; Brunzell et al., 2016; Cook et al., 2005; Prince-Embury, 2014; van der Kolk, 2003), character strength literature (e.g., Hamby et al., 2018; Park et al., 2017; Peterson & Seligman, 2004; Shoshani, 2019; Shoshani & Aviv, 2012; Shoshani & Shwartz, 2018; Wagner & Ruch, 2015; Wagner et al., 2020; Weber et al., 2016), and positive education literature (Brunzell & Norrish, 2021; Brunzell et al., 2016; CASEL, 2020; OECD, 2017; Stokes et al., 2019). From a developmental perspective, the literature suggests the identified character strengths could act as pathways to support both bottom-up regulation (i.e., regulating the stress response system, limbic system through strengths of relationship, strengths of self-control) and top-down processing (i.e., cognitive/thinking through strengths of meaning, strengths of action; Brunzell et al., 2016; Brunzell & Norrish, 2021; Stokes et al., 2019). The increased usage of these character strengths may then aid individuals who have experienced trauma to foster healthy relationships, self-control, perseverance, and meaning, which has been associated with increased well-being (Casali et al., 2021), post-traumatic growth (Hamby et al., 2018; Peterson et al., 2008), positive relationships (García-Vázquez et al., 2020; Wagner, 2019), and academic success (Wagner et al., 2020; Wagner & Ruch, 2015). The CSUP-S, then, is the first assessment tool to evaluate usage in each character strength in the domains noted.

### Research Questions

1: In the school setting, how do educators perceive and describe the identified character strengths for the Character Strength Usage Profile for Students?
2: Does the Character Strength Usage Profile for Students demonstrate evidence of content validity for each of the character strengths included in the CSUP-S?
3: To what extent do educators consider the Character Strength Usage Profile for Students to be a useful school-based assessment?
4: Does the hypothesized factor structure of the Character Strength Usage Profile adequately capture the patterns of responses from the pilot study?
5: Do the scores on the Character Strength Usage Profile for Students show evidence of internal consistency for each of the individual character strengths?

## Methodology

The development and preliminary validation of the CSUP-S were conducted using a mixed-method exploratory design that utilized a multi-step method that applied results from qualitative methodology to inform and develop the quantitative methodology (Creswell & Plano Clark, 2006). In

the field of education, the *Standards for Educational and Psychological Testing* (*Standards*; American Educational Research Association, American Psychological Association, & National Council on Measurement in Education, 2014) is used to guide instrument development and was utilized for this study as a guideline for best practice. This study was approved by the [*University removed for review* purposes] Institutional Review Board protocol number X22-0003.

## Step 1: Comprehensive Literature Review

A thorough review of literature on the VIA Classification, childhood trauma, assessment in schools, and instrument development was conducted to guide test construction and variable selection from a trauma-informed perspective. This review informed the initial draft of the CSUP-S, drafted before starting Step 2. Literature was gathered from University databases (e.g., PsycINFO), Google Scholar, the VIA Institute on Character's website, and the author's personal resources. A total of 189 manuscripts were reviewed. Please see Trudel (2023) for the complete literature review.

## Step 2: Focus Group and Expert Feedback

### Participants

The focus group included six educators (K-12 teachers and one school counselor) who were experienced with the VIA classification in schools. Recruitment was done via purposeful convenience sampling through professional organizations, contacts, snowball recruiting, and social media. Expert reviewers ($n = 5$) in positive psychology, character strengths, and teaching provided additional feedback.

### Measures

**Focus Group Screener** Participants were screened based on occupation (e.g., teacher, school psychologist, administrator) and experience with the VIA classification of character strength. Those who met the screening criteria were then prompted to complete a consent form.

**Focus Group Demographic Survey** Collected age, gender, race, and ethnicity data. These data were collected to track the representativeness of the sample.

### Procedures

Focus group participants completed a screening survey, informed consent, and demographic survey. Surveys and information about the study were provided and collected through Qualtrics. The focus group was conducted virtually using WebEx and lasted approximately one hour and forty-five minutes. Focus group discussions focused on authentic language for character strength usage in schools and refining the CSUP-S. After completion of the session, participants were sent the demographics survey and given a $100 Amazon gift card.

Concurrent with recruiting and conducting the focus group, seven experts were emailed to provide feedback on the CSUP-S. Six agreed to provide feedback and five provided feedback. Each expert was provided the character strength conceptual definitions and Draft 1 of the CSUP-S. Feedback was provided qualitatively on conceptual definitions for each character strength and item content.

### Analysis for Content Validation

The analysis of focus group data was used to identify themes in character strength usage at school, generally, and usage of the nine identified character strengths, specifically, to refine the initial draft of the CSUP-S. This data, along with direct feedback from experts, was used to refine the initial item wording and instructions of the CSUP-S for iteration one of the cognitive interviews.

## Step 3: Cognitive Interviewing

### Participants

As the CSUP-S is intended to be used with students in kindergarten through high school, participants for cognitive interviews included kindergarten through high school classroom teachers who were already familiar with the VIA classification of character strengths. Iteration one included six educators, and iteration two included five educators (total sample $n = 11$). Recruitment was similar to Step 2.

### Measures

**Cognitive Interviewing Screener** Participants were screened on occupation (i.e., teacher) and experience with the VIA Classification of Character Strengths and Virtues. Those who met the screening criteria were then prompted to complete a consent form.

**Cognitive Interviewing Instrument** A cognitive testing instrument was developed to include both a think-aloud technique and direct probing to remedy threats to survey intelligibility by assessing respondent comprehension of items, retrieval of relevant information, judgments based on

recall, and the ability to map a response on the reporting system. This instrument was designed and edited based on focus group data and findings from the first cognitive interviewing iteration.

**Cognitive Interviewing Demographic Survey** Items in the demographic survey included age, gender identification, race, and ethnicity. This data was collected to track the representativeness of the sample.

## Procedures

A screening survey, informed consent, and information about the study were provided and collected through Qualtrics. Virtual interviews using WebEx lasted 60–90 min, focusing on uncovering issues with item wording and response accuracy. During the virtual interview, a think-aloud method was used, which allowed participants to verbalize their thought processes as they read and answer a question (Beatty & Willis, 2007). This method was used to uncover unanticipated problems in wording and item response. Direct probes were also used to help identify words or concepts that the teacher may be misunderstanding or misinterpreting (Beatty & Willis, 2007). This allowed participants to share language or ideas that are more commonly used in the school context relating to character strengths. After the session was completed, participants were sent the demographic survey and given a $100 Amazon gift card. This phase included two iterations.

### Analysis of Response Processes

Data from cognitive interviews was coded based on traditional cognitive coding (i.e., predetermined themes based on how the respondent is able to comprehend, interpret, recall, and respond to each item) and through theme and pattern coding (i.e., codes built from the data that may pertain to meaning and usage of certain character strengths; Willis, 2005). This informed further revisions to the CSUP-S.

## Step 4: Pilot Study

### Participants

Participants included 47 kindergarten through high school general education teachers (grades K-2 $n = 15$; grades 3–5 $n = 14$; grades 6–8 $n = 7$, grades 9–12 $n = 11$). To be eligible to participate teachers must have been general education elementary classroom teachers or general education secondary English/Language Arts teachers. A multi-method recruiting strategy was used to recruit a diverse sample of individuals. This plan included recruiting teachers to participate through convenience sampling, which included email scraping (e.g., Character.org, school and district staff webpages), professional contacts, and snowball recruiting. Johanson and Brooks (2010) reported that for a pilot or preliminary study, the sample size for initial instrument development is at minimum 30 representative participants from the population of interest to produce a Cronbach's alpha of 0.80. McCoach et al. (2013) recommend a minimum sample size of 200 responses for pilot studies. Teachers were asked to complete the CSUP-S for five of their students. A total of 221 surveys from 47 teachers were used in the analysis (approximately five surveys per teacher).

### Measures

**Character Strength Usage Profile for Students (CSUP-S)** The final 33-item instrument assesses 11 character strengths on an 11-point Likert scale. Teachers rated each student's strengths on an 11-point scale from *Never* (0) to *Always* (10). Teachers have the option to select "Not Observed" if a particular strength has not been observed over the past four weeks. See online supplemental materials for item listing and order.

### Procedures

Participants were recruited as described above. A link to a screener was included in recruitment messaging. Upon successful completion of the screener, teachers were provided a link to survey materials in Qualtrics. Prior to completing the CSUP-S, teachers were provided an information sheet, suggestions for completing the survey, and a PDF of the CSUP-S. Teachers then completed the CSUP-S for a systematic subsample of students in their class to increase representativeness in the sample. Teachers selected students from their class that matched each of the following categories and completed a survey for each of these five students. Descriptions of student classification criteria for teachers were as follows:

- *Student in special education*: Student has been legally identified with a special educational classification (e.g., Specific Learning Disability, Autism, Emotional Disturbance, Intellectual Disability).
- *High academic achieving student*: Student is a top performer (i.e., A average), is interested and attentive during lessons, completes assignments on time, and learns with ease. Student is not in special education.

- *Average academic performing student*: Student is neither a top nor bottom performer. Student is not in special education.
- *Student with behavioral challenges*: Student has difficulty with social, emotional, and/or behavioral regulation that results in discipline referrals, teacher reprimands, and/or difficulties with peer and/or adult relationships. Student is not in special education.
- *Student who displays desired behaviors*: Student is attentive during lessons, participates often during class, completes most assignments on time, and is liked by peers and adults. Student is not in special education.

Demographic information for each student was collected, including age, biological sex, gender identification, race, ethnicity, and months known by the teacher. All surveys were anonymous; therefore, student information was not identifiable. After completion of the surveys, participants were directed to a separate survey to enter their school email address to receive a $25 Amazon gift card.

#### Analysis of Pilot Study

RStudio statistical software was used to conduct a confirmatory factor analysis, Cronbach's alpha for internal consistency, and mean and standard deviation calculations. Post-hoc analyses addressed the non-independence of observations.

## Results

The development process for the CSUP-S consisted of four key steps: a comprehensive literature review, focus group and expert feedback, cognitive interviews, and pilot study each contributed to the instrument's refinement and relevance to the school setting. A more comprehensive analysis of the development steps can be found in the supplemental materials.

### Step 1: Comprehensive Literature Review

The literature review guided variable selection and initial instrument development. Nine character strengths—love, kindness, social intelligence, forgiveness, prudence, self-regulation, perseverance, hope, and gratitude—were chosen based on research in character strengths, positive education, and trauma-informed practices. Definitions and items were derived from the VIA Institute on Character and operationalized for measurability in schools. An 11-point response scale was selected to allow for sensitive tracking of student progress.

### Step 2: Focus Group and Expert Feedback

#### Focus Group

Six primary and secondary educators participated in a focus group in February 2022 that lasted approximately one hour and forty-five minutes. Participants represented three countries, were majority white, majority non-Hispanic/Latine, majority female and cisgender, and ages ranged from 25 to 60 years ($M = 38.7$, $SD = 13.0$). Participants had pre-existing experience using the VIA classification of character strengths in the school setting. Ideas and examples pertaining to strength usage and observable behaviors in the school setting were generated and used to modify instructions and item wording. The focus group yielded valuable information in three areas: (a) descriptions of character strength use at school, (b) additional character strengths for inclusion on the CSUP-S, and (c) potential instrument benefit to schools.

#### Expert Feedback

Concurrently, expert feedback was obtained to examine the original version of conceptual definitions and items for each of the nine character strengths. Seven experts were contacted and asked to provide feedback, six agreed to provide feedback, and five provided feedback. Experts included individuals who have direct experience using character strengths in schools or research settings or are experienced educators who have experience with assessment. Each expert was provided the character strength conceptual definitions and the original version (i.e., Draft 1) of the CSUP-S. Feedback was provided on conceptual definitions for each character strength, items, and general qualitative comments were provided.

Focus groups with educators highlighted the importance of measuring character strengths in schools and generated modifications to item wording and instructions. Participants suggested adding creativity and judgment as character strengths, emphasizing their relevance to student resilience and critical thinking. Educators noted the benefits of providing a shared vocabulary for strengths and opportunities to recognize and communicate students' strengths. Expert reviewers identified areas for improvement in item clarity and conceptual definitions, leading to further refinements.

### Step 3: Cognitive Interviews

Two iterations of cognitive interviews were conducted. The first iteration occurred between March 28, 2022 and April 14, 2022, and the second iteration lasted from May 10, 2022 to May 30, 2022. Participants in the first iteration included six primary and secondary teachers, and the second iteration

included five primary and secondary teachers. Teachers from both iterations represented nine school districts and who were familiar with the VIA Classification.

Two rounds of cognitive interviews with teachers resulted in adjustments to the instructions and items to enhance clarity and usability. Participants viewed the CSUP-S as a meaningful tool for supporting student development, with applications in goal-setting, progress monitoring, and fostering strengths across academic, social, emotional, and behavioral domains. Some concerns were raised about the feasibility of use for all students and the potential misuse of data by administrators.

The iterative process resulted in a refined final version of the CSUP-S, designed to support educators in fostering student well-being and growth through a strengths-based lens.

## Final Version of CSUP-S

The final items included in the CSUP-S used for the pilot study can be found in the online supplemental materials. The relationship between the original VIA character strengths and those selected for use on the CSUP-S are show in Fig. 1.

## Step 4: Pilot Study

Recruitment launched on October 24, 2022, and concluded on December 21, 2022. Recruitment emails were sent to an estimated 650 teachers across 10 states (Alabama, Arizona, Connecticut, Michigan, New Jersey, New York, Pennsylvania, Virginia, Washington, and Wisconsin), making the response rate approximately 7.2%. A total of 221 surveys from 47 general education teachers were used in the analysis. Surveys with 50% or more of items missing were removed from the analysis ($n=1$). Seven teachers started completing surveys for each of the five categories of students but did not complete observations for every student classification group (i.e., they closed out the survey before completing responses for all five students). These surveys were included in the analysis. Teachers represented 14 school districts across the United States. Demographics were collected on students provided by the classroom teacher. Table 1 shows the demographic characteristics of the total sample and each student classification group.

## Data Screening

Survey data were screened to ensure there were no inconsistencies or problems with data entry. Due to a survey response option of "Not Observed," there were missing data in responses ($n=244$). To address missing data in the analysis, Full Information Maximum Likelihood (FIML) was used, which uses all available responses for each respondent (Little & Rubin, 2019). According to McCoach et al. (2013), a minimum sample size of 200 observations that are representative of the target population can be adequate for a pilot study, though researchers should attempt to obtain the 10:1 *N*:p ratio. Although the present study acquired over 200 observations ($n=221$), these observations were not independent and is a limitation of the study. Lastly, the

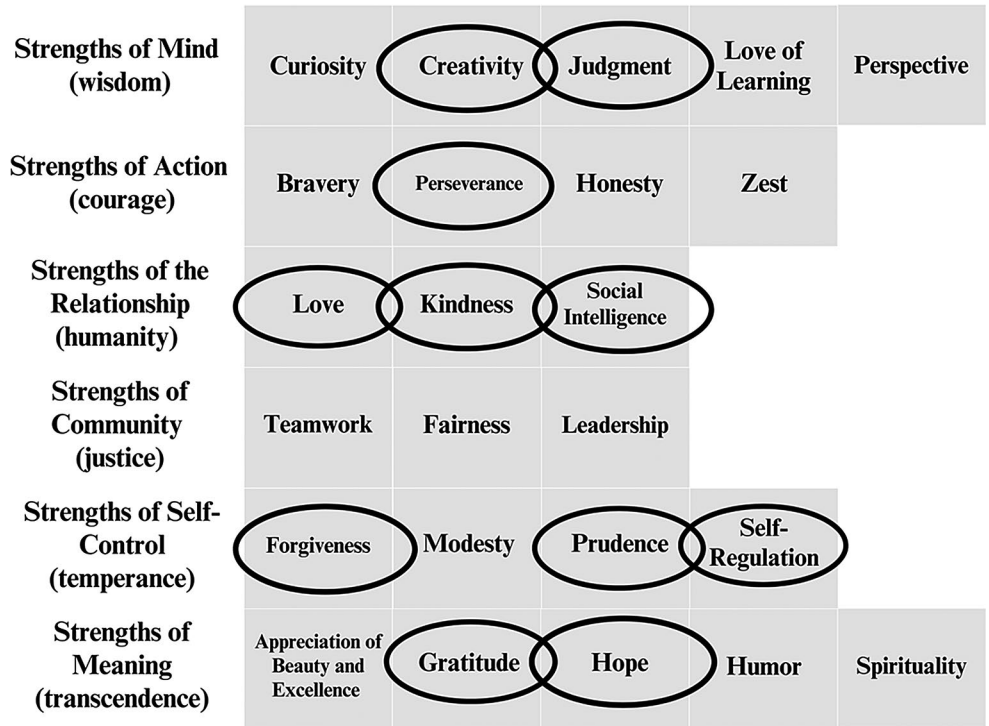


**Fig. 1** VIA character strengths and final character strengths selected for CSUP-S. *Note*: TIPE nomenclature was used in the present study to guide strength domain descriptions. Original VIA character strength domains are in parentheses for comparison

**Table 1** Demographic characteristics of students by total sample and classification group

| Characteristics | Total Sample | | Group 1 | | Group 2 | | Group 3 | | Group 4 | | Group 5 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *n* | % | *n* | % | *n* | % | *n* | % | *n* | % | *n* | % |
| Age in years (*M*) | (10.13) | | (10.00) | | (10.40) | | (10.14) | | (9.95) | | (10.15) | |
| (*SD*) | (3.54) | | (3.41) | | (3.66) | | (3.50) | | (3.54) | | (3.73) | |
| (Range) | (5–18) | | (5–16) | | (5–18) | | (5–17) | | (5–17) | | (5–18) | |
| Months known by teacher (*M*) | (4.73) | | (4.01) | | (6.07) | | (4.27) | | (4.21) | | (5.12) | |
| (*SD*) | (5.71) | | (3.58) | | (8.81) | | (3.91) | | (4.08) | | (6.32) | |
| Grade | | | | | | | | | | | | |
| K-2 | 71 | 32.1 | 15 | 33.3 | 16 | 30.4 | 13 | 28.9 | 13 | 30.2 | 12 | 29.3 |
| 3–5 | 66 | 29.9 | 14 | 39.4 | 14 | 34.8 | 16 | 35.6 | 15 | 34.9 | 14 | 34.1 |
| 6–8 | 35 | 15.8 | 6 | 13.0 | 6 | 13.0 | 7 | 15.6 | 6 | 14.0 | 6 | 14.6 |
| 9–12 | 49 | 22.2 | 11 | 23.9 | 10 | 21.7 | 9 | 20.0 | 9 | 20.9 | 9 | 22.0 |
| Biological sex | | | | | | | | | | | | |
| Female | 108 | 48.9 | 14 | 30.4 | 30 | 65.2 | 23 | 51.1 | 14 | 32.6 | 27 | 65.9 |
| Male | 109 | 49.4 | 31 | 67.4 | 14 | 30.4 | 21 | 46.7 | 29 | 67.4 | 14 | 34.1 |
| Unknown/prefer not to say | 4 | 1.8 | 1 | 2.2 | 2 | 4.3 | 1 | 2.2 | 0 | 0.0 | 0 | 0.0 |
| Gender | | | | | | | | | | | | |
| Female (cisgender) | 105 | 47.5 | 12 | 26.1 | 31 | 67.4 | 23 | 51.1 | 13 | 30.2 | 26 | 63.4 |
| Male (cisgender) | 104 | 47.1 | 32 | 69.6 | 12 | 26.1 | 19 | 46.7 | 28 | 65.1 | 13 | 31.7 |
| Genderqueer/ gender-nonconforming neither exclusively male nor female | 4 | 1.8 | 0 | 0.0 | 1 | 2.2 | 1 | 2.2 | 1 | 2.3 | 1 | 2.4 |
| Unknown/prefer not to say | 8 | 3.6 | 2 | 4.3 | 2 | 4.3 | 2 | 4.4 | 1 | 2.3 | 1 | 2.4 |
| Race | | | | | | | | | | | | |
| Asian | 22 | 10.0 | 1 | 2.2 | 7 | 15.2 | 8 | 17.8 | 1 | 2.3 | 5 | 12.2 |
| Black or African American | 53 | 24.0 | 12 | 26.1 | 9 | 19.6 | 8 | 17.8 | 12 | 27.9 | 12 | 29.3 |
| Middle Eastern or North African | 7 | 3.2 | 1 | 2.2 | 1 | 2.2 | 2 | 4.4 | 3 | 7.0 | 0 | 0.0 |
| Native Hawaiian or Other Pacific Islander | 1 | 0.4 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 2.4 |
| White or European Descent | 110 | 49.8 | 5 | 10.9 | 22 | 47.8 | 21 | 46.7 | 21 | 48.8 | 19 | 46.3 |
| Two or more races | 8 | 3.6 | 0 | 0.0 | 3 | 6.5 | 1 | 2.2 | 4 | 9.3 | 0 | 0.0 |
| Unknown/prefer not to say | 20 | 9.0 | 27 | 58.7 | 4 | 8.7 | 5 | 11.1 | 2 | 4.7 | 4 | 9.8 |
| Ethnicity | | | | | | | | | | | | |
| Hispanic, Latino/a/x, or of Spanish origin | 40 | 18.1 | 13 | 28.3 | 4 | 8.7 | 10 | 22.2 | 7 | 16.3 | 6 | 14.6 |
| Not Hispanic, Latino/a/x, or of Spanish origin | 157 | 71.0 | 27 | 58.7 | 37 | 80.4 | 32 | 71.1 | 32 | 74.4 | 29 | 70.7 |
| Unknown/prefer not to say | 24 | 10.9 | 6 | 13.0 | 5 | 10.9 | 3 | 6.7 | 4 | 9.3 | 6 | 14.6 |
| Total *N* | 221 | | 46 | | 46 | | 45 | | 43 | | 41 | |

Note Percentages may not sum to 100% due to rounding. Group 1 = Student in special education; Group 2 = High academic achieving student; Group 3 = Average academic performing student; Group 4 = Student with behavioral challenges; Group 5 = Student who displays desired behaviors

inter-item correlations were examined. In general, items were highly correlated ($r = 0.45 - 0.94$).

## Confirmatory Factor Analysis

A CFA was conducted using the lavaan package (Rosseel et al., 2023) in RStudio. A CFA was used because a priori linkages between items, character strengths, and overarching strength domains were hypothesized. The total number of observations for the analysis was 221 observations. The final version of the CSUP-S consisted of 33 items, with three items delineated for each character strength.

Two models were tested. The first model was a second-order model where individual items are nested within a character strength, and character strengths are then nested within their overarching strength domain ($n = 5$). A first-order model was also examined in which individual items nested within a character strength and all factors were allowed to correlate (see Fig. 2). For both models, all factor pattern coefficients and factor correlations were significantly different from zero with a positive linear relationship. The model addressed missing data using FIML. The missing values are then addressed by using the sample data to estimate the value of some population parameters by determining the value that maximizes the likelihood function (Enders, 2001).

For the second-order model, individual items were nested into individual character strengths, which were then nested within five overarching strength domain factors: Strengths of Relationship, Strengths of Self-Control, Strengths of Action, Strengths of Mind, and Strengths of Meaning. The second-order model exhibited a less than satisfactory fit, $\chi^2(475) = 1139.228$ ($p < 0.001$), RMSEA = 0.080 (90% CI [0.074, 0.085]), SRMR = 0.069, TLI = 0.909, CFI = 0.918.

The first-order, 11-factor model was examined in which individual items were nested within a character strength: kindness, love, social intelligence, self-regulation, prudence, forgiveness, perseverance, judgment, creativity, gratitude, and hope. All factors were allowed to correlate. The first-order model exhibited a more acceptable fit, $\chi^2(440) = 1059.26$ ($p < 0.001$), RMSEA = 0.08 (90% CI [0.074, 0.085]), SRMR = 0.037, TLI = 0.909, CFI = 0.924 and resulted in an admissible solution. The final instrument version used for the pilot test contained three items per character strength factor (see Fig. 1 for the first-order model factor structure). Factor pattern coefficients were each above 0.50, ranging from 0.802 to 0.978, indicating each item is a good indicator of the overarching character strength. Factors in the model were highly correlated. These high levels of correlations are troubling, yet not unexpected. Theoretically, factors in the model were expected to correlate with one another. Still, such high correlations indicate these factors may not be measuring different constructs and may indicate redundancy of items within each factor. See Table 2 for model descriptive statistics.

## Reliability Analysis

Cronbach's coefficient alpha was used to examine the reliability, or the internal consistency, of the CSUP-S. Scale reliabilities for the model were as follows: Kindness (α = 0.95), Love (α = 0.86), Social Intelligence (α = 0.95), Self-Regulation (α = 0.97), Prudence (α = 0.96), Forgiveness (α = 0.92), Perseverance (α = 0.97), Judgment (α = 0.97), Creativity (α = 0.97), Gratitude (α = 0.97), and Hope (α = 0.97). Items on the CSUP-S were presented as one unit within the character strength subscale. This formatting may have led to such high reliability estimates.

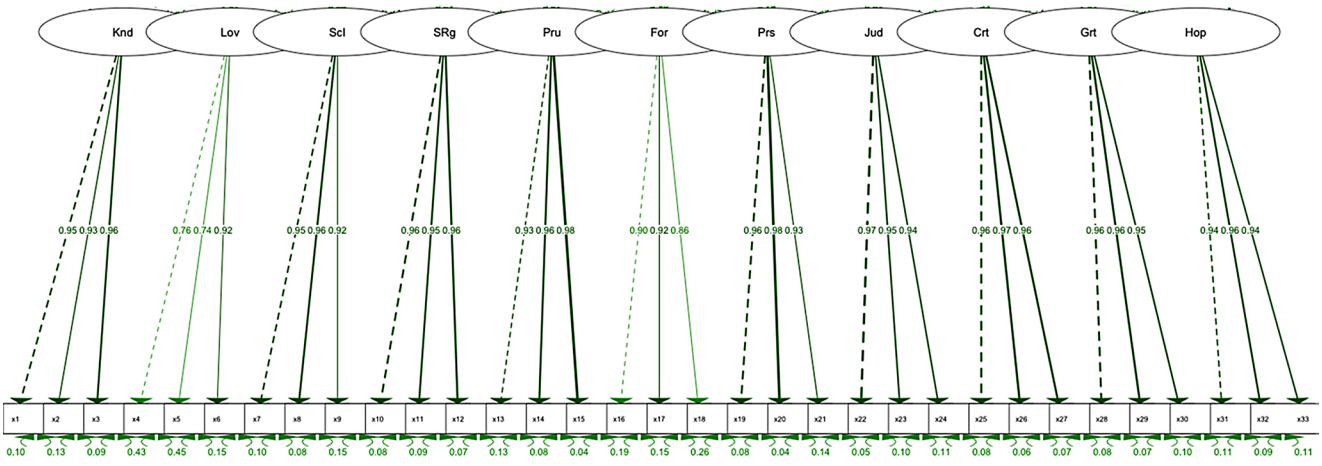


**Fig. 2** First-order model factor structure. Note: All factors and items were allowed to freely correlate with each other. Knd = kindness, Lov = love, ScI = social intelligence, SReg = self-regulation, Pru = prudence, For = forgiveness, Prs = perseverance, Jud = judgment, Crt = creativity, Grt = gratitude, Hop = hope

Reliability estimates were also calculated for each scale on the second-order and first-order models for each of the student criteria groups. For the second-order model, across student criteria groups scale reliabilities ranged from 0.89 to 0.98. Again, high α were present across factors. For the first-order model, reliabilities ranged from 0.69 to 0.98. Across factors, reliabilities are generally high with the exception of forgiveness for average academic students (α = 0.69) and students with behavioral challenges (α = 0.77), indicating variability of teacher responses between the items within the forgiveness factor for these groups.

## Addressing Issues of Non-independence

Several analyses were conducted to address the issue of non-independence of observations and to examine possible differences between student criteria groups. First, an unconditional cross-classified random effects model (UCCREM) was conducted. The UCCREM accounts for responses being cross-classified by teacher and student categories and partitions variance into three sources: variance attributable to the teacher, variance attributable to the student category, and residual variance (variance that is explained by neither the teacher nor student category). The larger the variance, the greater the influence of a particular source (e.g., student criteria type, teacher). One concern of having teachers complete multiple surveys is that data could be clustered based within teachers; examining between teacher variance helps to determine how much of the variability in responses can be attributed to which teacher completed the survey. Results from the UCCREM indicate the percentage of total variance in the scale that is explained by the teacher is relatively low (range 0.00–11.59%). Generally, the student category type explains between one-third to one-half of the total variance on each character strength scale. This is a good indication that teachers are rating each student in each category differently.

Next, student criteria groups were examined separately from whole sample data, making observations independent with one teacher reporting on one student within each group. Character strength usage patterns emerged between student criteria groups (see Table 2). Students in special education and students with behavioral challenges were reported to have lower strength usage across individual character strengths. Notably, teachers reported the character strength of love highest for both students in special education ($M = 6.67$) and students with behavioral challenges ($M = 6.32$). For students in special education, judgment and creativity – both strengths of the mind – were reported as the lowest used character strength ($M = 4.23$, $M = 4.46$, respectively). For students with behavioral challenges, self-regulation ($M = 3.03$) and judgment ($M = 3.49$) were reported as

**Table 2** First-order model descriptive statistics

| Factor | Whole Sample | | | Special Education Students | | | High Achieving Students | | | Average Academic Performing Students | | | Students with Behavioral Challenges | | | Students Who Display Desired Behaviors | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M | SD | α | M | SD | α | M | SD | α | M | SD | α | M | SD | α | M | SD | α |
| Kindness | 7.26 | 2.61 | 0.95 | 6.04 | 2.74 | 0.94 | 8.70 | 1.44 | 0.95 | 7.95 | 1.98 | 0.95 | 4.92 | 2.59 | 0.92 | 8.64 | 1.80 | 0.95 |
| Love | 7.66 | 2.29 | 0.86 | 6.67 | 2.43 | 0.90 | 8.65 | 1.63 | 0.87 | 8.00 | 2.01 | 0.83 | 6.32 | 2.63 | 0.76 | 8.61 | 1.46 | 0.93 |
| Social Intelligence | 6.99 | 2.85 | 0.95 | 4.69 | 2.79 | 0.93 | 8.91 | 1.42 | 0.81 | 8.02 | 1.81 | 0.90 | 4.62 | 2.26 | 0.86 | 8.76 | 1.91 | 0.92 |
| Self-Regulation | 6.68 | 3.33 | 0.97 | 4.96 | 3.34 | 0.97 | 8.83 | 1.75 | 0.90 | 7.80 | 2.30 | 0.92 | 3.03 | 2.37 | 0.87 | 8.72 | 2.08 | 0.97 |
| Prudence | 6.92 | 3.11 | 0.96 | 5.19 | 2.98 | 0.95 | 9.09 | 1.41 | 0.94 | 7.96 | 1.99 | 0.91 | 3.68 | 2.67 | 0.85 | 8.68 | 2.12 | 0.98 |
| Forgiveness | 7.02 | 2.92 | 0.92 | 5.33 | 3.01 | 0.93 | 8.73 | 1.86 | 0.89 | 7.78 | 2.10 | 0.69 | 4.47 | 2.62 | 0.77 | 8.78 | 1.79 | 0.97 |
| Perseverance | 7.17 | 3.04 | 0.97 | 5.65 | 2.93 | 0.94 | 9.25 | 1.66 | 0.96 | 7.99 | 2.20 | 0.95 | 4.21 | 2.81 | 0.94 | 8.77 | 1.97 | 0.96 |
| Judgment | 6.49 | 3.11 | 0.97 | 4.23 | 2.56 | 0.92 | 8.85 | 1.76 | 0.94 | 7.10 | 2.16 | 0.93 | 3.49 | 2.65 | 0.94 | 8.50 | 1.86 | 0.95 |
| Creativity | 6.52 | 2.91 | 0.97 | 4.46 | 2.37 | 0.91 | 8.91 | 1.46 | 0.93 | 6.78 | 2.11 | 0.96 | 4.35 | 2.95 | 0.96 | 8.02 | 2.14 | 0.97 |
| Gratitude | 7.44 | 2.63 | 0.97 | 6.07 | 2.86 | 0.99 | 8.95 | 1.29 | 0.94 | 8.12 | 1.47 | 0.82 | 5.01 | 2.80 | 0.94 | 8.93 | 1.60 | 0.98 |
| Hope | 7.20 | 2.86 | 0.97 | 5.35 | 2.86 | 0.98 | 9.06 | 1.50 | 0.97 | 7.89 | 1.89 | 0.88 | 4.72 | 2.92 | 0.94 | 8.73 | 1.76 | 0.96 |

**Table 3** Effect sizes between student criteria and character strength scales

| Factor | Special Education vs. High Achieving | | Special Education vs. Average | | Special Education vs. Behavioral Challenges | | Special Education vs. Desired Behaviors | | Behavior Challenges vs. Desired Behaviors | |
|---|---|---|---|---|---|---|---|---|---|---|
| | d | *r* | d | *r* | d | *r* | d | *r* | d | *r* |
| Kindness | -1.22 | -0.52 | -0.80 | -0.37 | 0.42 | 0.21 | -1.21 | -0.49 | -1.67 | -0.64 |
| Love | -0.96 | -0.43 | -0.60 | -0.29 | 0.14 | 0.07 | -0.97 | -0.44 | -1.08 | -0.66 |
| Social Intelligence | -1.91 | -0.69 | -1.42 | -0.58 | 0.03 | 0.01 | -1.70 | -0.65 | -1.98 | -0.64 |
| Self-Regulation | -1.45 | -0.59 | -0.99 | -0.44 | 0.67 | 0.32 | -1.35 | -0.56 | -2.55 | -0.79 |
| Prudence | -1.67 | -0.64 | -1.09 | -0.48 | 0.53 | 0.26 | -1.35 | -0.56 | -2.07 | -0.72 |
| Forgiveness | -1.36 | -0.56 | -0.94 | -0.43 | 0.30 | 0.15 | -1.39 | -0.57 | -1.92 | -0.69 |
| Perseverance | -1.51 | -0.60 | -0.90 | -0.41 | 0.50 | 0.24 | -1.25 | -0.53 | -1.88 | -0.68 |
| Judgment | -2.10 | -0.72 | -1.21 | -0.52 | 0.28 | 0.14 | -1.91 | -0.69 | -2.19 | -0.74 |
| Creativity | -2.26 | -0.75 | -1.03 | -0.46 | 0.04 | 0.02 | -1.58 | -0.62 | -1.42 | -0.58 |
| Gratitude | -1.30 | -0.54 | -0.90 | -0.41 | 0.37 | 0.18 | -1.23 | -0.53 | -1.72 | -0.65 |
| Hope | -1.62 | -0.63 | -1.05 | -0.46 | 0.21 | 0.11 | -1.42 | -0.58 | -1.66 | -0.64 |

the lowest-used character strength. High-achieving students and students who display desired behaviors were reported to have higher strength usage across character strength domains and individual character strengths.

Effect size estimates using Cohen's *d* were also calculated to examine the magnitude of differences between special education students as compared to student criteria groups and students with behavior challenges as compared to students with desired behaviors (see Table 3). Ferguson (2016) notes that the recommended minimum effect size for practical significance is d = 0.41, although the author cautions that this number is merely a guideline and should not be applied rigidly. Effect sizes are defined as small ($d$ = 0.2), medium ($d$ = 0.5), large ($d$ = 0.8), and very large ($d$ = 1.3; Sullivan & Feinn, 2012). Across student criteria group comparisons, effect sizes ranged from minimal effect ($d$ = 0.03) to very large ($d$ = -2.55). Large to very large effect sizes emerged between special education students and high achieving students, average students, and students who display desired behaviors, and between students with behavior challenges and students who display desired behaviors ($d$ range = -0.80 – -2.55). These differences were present across all character strengths, with one exception: the character strength of love demonstrated a medium effect size between special education students and average students ($d$ = -0.60). The magnitude of the difference in character strength usage for students in special education in comparison to high achieving students, average students, and students who display desired behaviors indicates a considerable difference in how character strength usage is perceived by teachers. The negative effect sizes reveal that special education students are perceived to have a substantially lower usage of character strengths. This is also true when examining the difference between students who have behavioral challenges as compared to students who display desired behaviors. The smallest effect sizes were present between special education students and students with behavioral challenges (range = 0.03–0.53). Practical differences ($d \geq$ 0.41) emerged with the character strengths of self-regulation ($d$ = 0.67), prudence ($d$ = 0.53), perseverance ($d$ = 0.50), and kindness ($d$ = 0.42). These results indicate that students in special education generally are reported as having self-regulation, prudence, perseverance, and kindness strength usage over students with behavioral challenges. The effect size analyses provide encouraging information on the CSUP-S's utility in the school setting in identifying strength usage patterns. Large to very large effect sizes indicate the instrument's potential for capturing meaningful differences in character strength usage across various student profiles.

## Discussion

Research suggests the importance of character strength usage in the school setting for fostering student well-being (Casali et al., 2021), post-traumatic growth (Hamby et al., 2018), positive relationships (García-Vázquez et al., 2020; Wagner, 2019), and academic success (Wagner et al., 2020; Wagner & Ruch, 2015). Yet having a trauma-informed measure developed for teachers to depict strength usage, or how frequently a student displays a strength, does not yet exist. This project sought to develop the first teacher report instrument to examine student character strength usage in the school setting for children in primary through secondary schools from a trauma-informed lens.

### Meaningful Usage in Schools

Across participants in the focus group and cognitive interviews, participants agreed an instrument to measure character strength usage at school would be beneficial. During the focus group, educators reported the need for the tool to

provide teachers with a common language to describe character strength usage. This language was also identified as beneficial for acknowledging students, delivering praise for strength usage in the classroom, and helping students understand how to leverage their strengths. Communication of strengths could also be beneficial in working with families. Highlighting student character strength usage during parent meetings expands beyond academics, which can be beneficial for students who may have limited academic strengths. Similarly, during cognitive interviews, teachers reported the benefits of using the CSUP-S during parent-teacher conferences to discuss how students use their strengths at school. Furthermore, the tool could be used to track character strength growth over the school year, inform student Individual Education Plan (IEP) goals and objectives, identify strengths across academic and social-emotional-behavioral realms, and inform targeted instruction to develop character strengths.

The CSUP-S yields insights into key character components that can provide a holistic understanding of supporting well-being, academic success, positive relationships, and post-traumatic growth for students who have experienced trauma. This was further explored by examining character strength usage profiles between the student criteria groups. Notably, lower levels of strength usage were reported for students in special education and students with behavioral challenges. It is important to note that the present study did not explicitly collect information on student trauma experiences and therefore leaves the relationship between the 11 character strengths and trauma still unknown. Higher levels of strength usage were reported for high-achieving students and students who display desired behaviors at school. When looking at the magnitude of differences between special education students and high achieving students, average students, and students who display desired behaviors, large to very large differences were revealed between students with behavior challenges and students who display desired behaviors. Though preliminary, these differences between groups are encouraging for the possible utility of the CSUP-S in the school setting by capturing meaningful differences in character strength usage.

Still, teachers did express realistic concerns about using the CSUP-S relating to the time commitment of completing the instrument and how the instrument might be used and interpreted. What is gleaned from this information is the importance of valuing teacher time for completing assessment tools and educator training in the use and purpose of the CSUP-S. Additionally, although teachers understood the purpose and items on the instrument, previous research supports using brief familiarization training on instrument usage to improve accuracy and understanding (Harrison et al., 2014; LeBel et al., 2010; Miller et al., 2014; Schlientz et al., 2009). This training can be used to inform the purpose of the instrument, how to complete the instrument, and how scores can be used to support students from a strengths-based perspective.

## Assessment Alignment for Evidence-Based Practice

"Evidence-based practice requires evidence" (Cipriano et al., 2023, p. 1198), and research suggests that there is a misalignment of outcome measures used to assess social and emotional programs and interventions (Cipriano et al., 2023). This assessment mismatch is leading to inconclusive outcomes because there is limited clarity on *what* and *how* constructs are being measured (Cipriano et al., 2023; McKown, 2019; Ng et al., 2022), for example, competence versus skill development (Cipriano et al., 2023). Additionally, many measures use macro or global indicators, which do not include the discrete components or skills of a particular domain (Cipriano et al., 2023; Ng et al., 2022).

The CSUP-S was intentionally developed in layers where a main overarching domain (e.g., strengths of self-control) is broken down into a core target (e.g., individual character strength of self-regulation) and then into subskills (e.g., an item representing an individual component of the strength). Subskills or individual components of a character strength can then be used to target specific techniques, strategies, or interventions to build that area. The 11-point scale allows for a more sensitive measurement for monitoring progress and growth. For example, the CSUP-S was designed to align with the TIPE framework and may be useful in evaluating strategies that regulate the body's stress response, such as Present-Centered-Grounded techniques, mindfulness, and self-regulation. These align with self-control strengths like prudence and self-regulation, allowing educators to track how well interventions foster physical and emotional stability. The CSUP-S also assesses relational capacity by measuring attachment-based strategies that cultivate a sense of safety, trust, and belonging. By focusing on strengths such as love, kindness, and social intelligence, the CSUP-S may provide a way to monitor and enhance the quality of relationships central to the TIPE model (Brunzell & Norrish, 2021; Stokes et al., 2019). Measuring this alignment will be crucial in future stages of the CSUP-S development.

## Limitations and Future Directions

There are several limitations to the current study. First, the study only utilized teacher reports of student character strength usage. Subjectivity is inherent in quantitative rating systems of latent variables (Annett, 2010), and teacher bias in rating scales is well documented (Mason et al., 2014). Therefore, data from individual participants

completing the CSUP-S for a subset of their students may be affected. To mitigate potential inaccuracies in reporting, future research may benefit from complementing the completion of the CSUP-S with classroom observations, observations of academic or behavioral tasks, and data from multiple informants. It will be important for self- and caregiver reports of the CSUP-S to be developed to provide holistic and comprehensive views of character strength usage across home, school, and community settings.

Furthermore, the race and ethnicity of respondents in this study are unknown. In the present pilot study, there is no way to tell if the sample of teachers is representative of the larger population of teachers or the United States population at large. Because the field of education is predominantly White (79.3%) and Female (76%; National Center for Education Statistics [NCES], 2021), it would be important to be inclusive of educators beyond this unbalanced demographic in the field. This racial, ethnic, and gender imbalance is also true for the focus group and cognitive interview participants. Future research on character strength usage in schools, broadly, and for further development of the CSUP-S, specifically, would benefit from diverse perspectives and perceptions of student character strength usage.

Lastly, the VIA classification of character strengths was used and influenced the character strengths chosen for the CSUP-S. The VIA classification is founded on several assumptions and criteria. Though this strength model is a fairly comprehensive taxonomy (McGrath et al., 2018; Peterson & Seligman, 2004), the VIA classification is just one cataloging system. There are other research-based character strength systems with alternative character strength nomenclature (e.g., Character Lab, 2023). Though similar in their effort to emphasize positive personality characteristics towards a good life, strength domains and individual character strengths have differences in names and descriptions. For example, strength domains through Character Lab are labeled strengths of heart, mind, and will and include strengths such as grit, decision-making, and purpose, to name a few. Perhaps most importantly, trauma and healing research needs to be explored to further understand which character strengths may best support the prevention of the impacts of trauma, foster well-being, and heal from trauma. With this in mind, future research on the CSUP-S would benefit from specifically targeting potentially trauma-impacted students. This may be done in partnership with alternative and outplacement educational settings. To understand the potential trauma impact on students, a survey such as an Adverse Childhood Experiences questionnaire may be used.

### Practical Implications

Despite limitations, the present study provides promising evidence for the preliminary validation of the CSUP-S for use in assessing character strength usage in primary through secondary students. The results demonstrate emerging evidence concerning its merit as a useful assessment within the school setting. Educators described many possible positive applications of the CSUP-S throughout the study. First, though the CSUP-S is designed from a trauma-informed lens, the character strengths included in the measure could be of benefit to all students. Considering the impacts of the COVID-19 pandemic on student well-being and helping all students to realize and understand their personal strengths outside of academics and natural talents, the instrument can aid in developing pathways to thrive through leveraging their character strengths. It is important to reiterate that this is just the first step for the CSUP-S and that additional research is warranted before making claims on the instrument's utility.

## Conclusion

The pilot validation study for the CSUP-S provides a compelling first step for the instrument's development. It will be necessary to conduct further research on the character strength constructs, specifically considering the breadth, polarity, and emergence of each strength to best support the prevention of the impacts of trauma, foster well-being, and heal from trauma. Analyses with a more representative sample of teacher respondents should also be conducted. Still, it is important to recognize the instrument's promise in adding to the inventory of strength-based assessment tools in schools. Measuring the usage of character strengths related to the success of students impacted by trauma is imperative to provide insight on how to best support students to not only overcome their deficits but also to develop critical pathways to thrive.

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## Declarations

**Ethical Approval** All procedures performed in studies involving human participants were in accordance with the ethical standards of the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. The study was reviewed and approved by the [*University removed for review* purposes] Institutional Review Board.

**Consent to Participate** Informed consent was obtained from all individual participants included in this study.

**Competing Interests** The authors declare no competing interests.

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