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School-based Approaches for the Universal Assessment of Adolescent Psychosocial Strengths

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INTRODUCTION

The assessment of psychosocial strengths[1] in children and adolescents has predominately focused on the measurement of single traits and constructs, such as grit (Christopoulou, Lakioti, Pezirkianidis, Karakasidou, & Stalikas, 2018), optimism (Oberle, Guhn, Gadermann, Thomson, & Schonert-Reichl, 2018), hope (Pedrotti, 2018), and gratitude (Gottlieb & Froh, 2019). Although there is substantial value in assessing and evaluating the beneficial correlates of individual constructs, we suggest that a whole-child paradigm (Alford & White, 2015) provides an optimal rationale supporting the use of comprehensive measures of psychosocial strengths. Strength-based measures have a clinical purpose when used by school psychologists as part of an individual child psycho-educational assessment, but we suggest that such measures have even greater utility when used to provide comprehensive information about psychosocial strengths of *all* students within the ecological context of local education agencies. In our chapter, we focus on strength-based tools developed for schoolwide universal screening. A second consideration that guides this chapter is that psychosocial strengths-based assessment has critical benefit and scientific rationale when grounded in a sound conceptual model that offers an understanding of the process and factors associated with quality of life outcomes[2] among adolescents.

COMPREHENSIVE STRENGTHS ASSESSMENT MODELS FOR SCHOOL CONTEXTS

Given these considerations, this chapter reviews comprehensive strength-focused assessments that monitor components of psychosocial strengths of all youth. We advocate for a holistic approach that examines strengths in combination rather than in isolation; that is, assessment of the integrative effects of the components of positive psychosocial development (Lenzi, Dougherty, Furlong, Dowdy, & Sharkey, 2015). Contemporary models of strengths-based assessment included in this chapter were selected for review based on 1) feasibility and utility as school-based universal screening tools such as the number of items and informants (self-report vs. teacher-report) and 2) evidence of compelling psychometric

[1] A number of terms are used in the literature to describe youth strengths such as psychological assets, strengths, attributes, functioning, and orientation. This chapter will use *psychosocial strengths*.
[2] A number of terms are used in the literature to describe positive life functioning such as quality of life, psychological well-being, mental well-being, and life satisfaction. This chapter will use *quality of life*.

properties, including replicated validity and generalizability with diverse samples of school-based children across three or more separate studies. For example, although VIA Youth Survey measures 24 comprehensive strength constructs among youth aged 10 to 17 years, the measure was not included due to limited use in schoolwide universal screening and a large number of items limiting the feasibility (i.e., 96-198 items). Models meeting this criteria and selected for review are as follows: (a) Lerner et al.'s (2005) Five Cs Model of Positive Youth Development (Competence, Confidence, Connection, Character, Caring); (b) Furlong et al.'s (2014) Covitality integrated social emotional mindset model (Belief-in-Self, Belief-in-Others, Emotional Competence, and Engaged Living); and (c) Kern, Benson, Steinberg, and Steinberg's (2016) Engagement, Perseverance, Optimism, Connectedness, and Happiness (EPOCH) model. For each assessment model, we provide an overview of the conceptual grounding of each measure, a summary of key psychometric studies, and illustrations of how the models' measures are being used in school-based research. We include examples of how comprehensive positive psychology measures are being employed by researchers and in local education agencies in Spain and the United States. Additionally, we provide readers with descriptions of, and access to, key online sources of information about strength-based assessments appropriate for use with children and adolescents.

Five Cs Model Positive Youth Development (PYD) Questionnaire

A growing framework for conceptualizing and studying adolescent psychosocial strengths globally is the positive youth development (PYD) perspective (Bowers et al., 2010). PYD capitalizes on the plasticity of adolescent biological development and capacity for positive systematic change through co-actions within the integrated developmental system (Lerner et al., 2018). While several hypotheses have been offered for conceptualizing PYD, this approach generally seeks to assist adolescents with reaching their full potential by helping them align their various strengths with resources that promote healthy development across various systems in their social environment (Lerner, Phelps, Forman, & Bowers, 2009).

One of the most empirically validated frameworks of PYD is the Lerner and Lerner Five Cs Model (Bowers, Geldhof, Johnson, Lerner, & Lerner, 2014; Heck & Subramaniam, 2009; Lerner et al.,

2005, 2015; Phelps et al., 2009). Derived from longitudinal data from the 4-H Study of PYD (a collaborative effort to identify individual and contextual factors associated with positive youth development), the Positive Youth Development Questionnaire[3] proposes that youth development is comprised of psychological, behavioral, and social characteristics. These are characterized by the original five interacting Cs: *Competence* (e.g., positive view of one's actions or abilities in social, academic, cognitive, health, and vocational areas), *Confidence* (e.g., sense of self-worth or self-efficacy), *Connection* (e.g., positive, mutual relationships with people and institutions, such as school, family, peers, and community), *Character* (e.g., respecting cultural and societal norms, abiding by standards for good behavior, morality, integrity), and *Caring* (e.g., sympathy and empathy for others; Bowers et al., 2010; Lerner et al., 2005). Adolescents require healthy development in each of these five areas, and as youth build these domains over time, they are more likely to be on a thriving life trajectory rather than become thwarted by engaging in risky or unhealthy behaviors (Bowers et al., 2010). Youth with thriving developmental trajectories are hypothesized to develop a sixth "C"—*Contribution*, which entails behaviors associated with contributing to oneself, family, community, and civil society (Lerner, 2004). Lerner and Lerner's model posits that contribution appears to be supported when the other aforementioned Cs are present.

Five Cs Model Psychometric Properties

The conceptual framework behind the Lerner and Lerner's PYD Model has been translated into a measurement model consisting of five latent constructs that map onto a second higher-order PYD latent variable (Lerner et al., 2005, 2015). This is one of the few existing approaches that attempts to integrate multiple indices of PYD (including academic achievement and self-esteem measures) to achieve a holistic conceptualization and assessment of youth development (Geldhof et al., 2014). Robust psychometric support (e.g., longitudinal measurement invariance, configural invariance, among others) has been

[3] *Measure available online at:* https://cyfar.org/sites/default/files/Positive%20youth%20development%20student%20short%20(10%20yrs%20and%20older)_0.pdf

documented for both children and adolescent populations from a diverse range of cultural and ethnic backgrounds in the United States (Bowers et al., 2010; Jeličić et al., 2007; Lerner et al., 2005; Lewin-Bizan et al., 2010; Phelps et al., 2009). Table 1 provides a summary of key psychometric studies documenting the reliability and validity of the Five Cs model. Notably however, the original 4-H data set used to establish measurement validity across these studies includes a convenience sample of youth from predominately upper- to middle-socioeconomic circumstances. Thus, more work is needed to establish the generalizability of this model to adequately capture experiences of positive youth development among youth of color and youth living in impoverished environments (Lerner et al., 2018).

Among Grade 5 students from the 4-H longitudinal data set, Jeličić and colleagues (2007) found the five latent C constructs of PYD to be significantly predictive of lower engagement in risk-taking behaviors, decreased experiences of depression, and an increase in community contribution type behaviors during Grade 6. Additionally, concurrent significant and positive correlations were found between all Five C indicators and adaptive development (e.g., life satisfaction and empowerment), as well as a significant inverse relation with maladaptive outcomes (e.g., symptoms of anxiety and depression) among a sample of Norwegian adolescents (Holsen, Geldhof, Larsen, & Ardal, 2017).

Five Cs Model: Research in Schools

In their review of cumulative results from investigations of the Five Cs Model, Lerner and colleagues (2018) surmised that youth strengths (e.g., intentional self-regulation, school engagement, hope for the future, spirituality), along with ecological assets (e.g., among family, schools, out of school programs, peer groups, and neighborhoods) have positive predictive validity related to concurrent and future youth thriving, as well as engaged citizenship. With respect to school-based applications of the Five Cs model, few studies have been conducted to date; however, researchers have found positive associations among emotional/behavioral, school engagement, academic achievement, self-regulation, peer support, and indicators of positive youth development among students in Grades 5 through 8 using the original data from the 4-H sample (Li & Lerner, 2011; Li, Lynch, Kalvin, Liu, & Lerner, 2011). In a study examining a sample of 997 Norwegian adolescents, researchers utilized structural equation

modeling to examine the relation between students' perception of an empowering school climate and satisfaction with school with the mediating role of the Five Cs model (Holsen et al., 2017). Results indicated that competence, confidence, and connection factors significantly predicted students' perceived satisfaction with school. Competence, confidence, and connection were found to fully mediate school empowerment on school satisfaction, with stronger coefficients obtained for female students (Ardal, Holsen, Diseth, & Larsen, 2017).

Five Cs Model Current Status and International Considerations

The Lerner and Lerner Five Cs PYD Model represents a sound developmental framework with robust psychometric evidence to support its use as an exemplar positive psychological assessment model to evaluate positive development among children and adolescents. Measurement validity and specific applications of the model have received growing international interest among researchers and youth-serving programs around the world, including China, Norway, Lithuania, Ireland, El Salvador, Malaysia, among others. For a review of recent psychometric and international applications of the Lerner and Lerner model among youth globally, see Lerner et al. (2018).

Covitality Model

Furlong and colleagues (2014) hypothesized that youth psychosocial strengths are linked to a higher-order trait, as is the case for many cognitive developmental theories suggesting that a general intelligence factor (g) represents a broad mental capacity that influences all intelligent skills. Using the term "Covitality" to represent a "g" factor for psychosocial strengths, it was defined as the "synergistic effect of positive mental health resulting from the interplay among multiple positive psychological building blocks" (Furlong, You, Renshaw, Smith, & O'Malley, 2013, p. 3). The term Covitality takes a counter approach to comorbidity, the co-occurrence of multiple disorders that often implies interactions associated with worse symptoms. Covitality proposes that the combination of psychosocial strengths and its synergic effects matter more than any single individual strength for quality of life among youth.

The Social Emotional Health Survey (SEHS; Furlong et al., 2014) was developed to measure Covitality among youth. There are three self-report versions of the SEHS – a Primary version (SEHS-P;

Furlong et al., 2013) for students in ages 9-12, a Secondary version (SEHS-S; Furlong, You et al., 2014) for students in ages 13-18, and a Higher Education version (SEHS-HE; Furlong, You, Shishim, & Dowdy, 2017) for college students[4]. The SEHS model views Covitality within a transactional development lens; the development of core psychosocial strengths (e.g., gratitude, empathy, and persistence) promotes positive interpersonal transactions within a child's socioecological systems, which in turn contribute to better developmental outcomes. Youth thrive and flourish in life when they develop psychosocial strengths that promote positive day-to-day interactions with family, teachers, and peers.

The SEHS-S (Furlong et al., 2014) is a 36-item measure that assesses 12 psychosocial strengths derived from the social emotional learning (SEL) and PYD literature (e.g., Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Furlong, Gilman, & Huebner, 2014; Masten, Cutuli, Herbers, & Reed, 2009; Zins, Bloodworth, Weissberg, & Walberg, 2007). These 12 psychosocial strengths are associated with four second-order positive social emotional constructs — (a) *belief-in-self* (self-awareness, self-efficacy, persistence); (b) *belief-in-others* (family coherence, peer support, school support); (c) *emotional competence* (emotion regulation, self-control, empathy); and (d) *engaged living* (optimism, zest, gratitude). These four domains load onto a higher-order latent trait, *Covitality*.

Covitality Psychometric Properties

Table 2 provides a summary of key studies examining the psychometric properties of the SEHS-S. An increasing number of studies provide evidence for the psychometric properties of the SEHS-S, including evidence of the reliability and validity of the higher-order model, internal consistency, construct and predictive validity, and invariance across sociocultural and gender groups including Japanese, South Korean, and U.S. samples (Ito, Smith, You, Shimoda, & Furlong, 2015; Lee, You, & Furlong, 2016; Telef & Furlong, 2017; You et al., 2015). Additionally, the SEHS-S overall Covitality score had strong convergent validity with measures of youth global psychosocial strengths. For example, the Covitality score had a significant positive relation with the Strengths and Difficulties Questionnaire (SDQ;

[4] *Measures available online at*: http://www.project-covitality.a2hosted.com/surveys/

Goodman, 1997) prosocial behavior subscale and a negative relation with the SDQ total difficulties scale among Turkish youths (Telef & Furlong, 2017). Furthermore, it was significantly correlated with quality of life outcomes such as subjective well-being among Korean youths (Lee et al., 2016) and depression, anxiety, and stress in Chinese youths (Xie et al., 2018). These studies provide empirical support for using the SEHS-S to identify students' quality of life outcomes in various countries.

Covitality Model: Research in Schools

Recognizing the importance of internal strengths for youths' quality of life, international school psychology scholars have adapted and used the SEHS-P and/or the SEHS-S to identify students' psychosocial strengths and their relations with various school outcomes. The SEHS-P has been translated and applied in elementary schools in Australia (Wilkins et al., 2015), South Korea (Kim et al., 2019), and China (Chan, Yang, Furlong, Dowdy, & Xie, 2019; Wang et al., 2018). Specifically, it was evaluated for its utility in predicting perceived school membership (Chan et al., 2019) and life satisfaction (Kim et al., 2019), as well as for its buffering effect on the relation between verbal peer abuse and psychosocial adjustment in children (Pineda et al., 2018). Additionally, the SEHS-S has been applied in middle and high schools within the U.S. (Carnazzo, Dowdy, Furlong, & Quirk, 2019; Dougherty & Sharkey, 2017), Australia (Boman, Mergler, & Pennell, 2017), South Korea (Kim et al., 2018; Lee et al., 2016), Japan (Ito et al., 2015), and Turkey (Telef & Furlong, 2017). It was utilized to identify positive psychological factors that improve academic achievement (Dougherty & Sharkey, 2017) and school connectedness (Kim et al., 2019), and reduce behavioral concerns such as truancy (Wroblewski, Dowdy, Sharkey, & Kim, 2019). Furthermore, Dowdy and colleagues (2015) discussed the utility of the SEHS-S in assisting schools developing strengths-based prevention plans for students.

Covitality Model Current Status and Future Considerations

Overall, these validation and application studies of the SEHS Covitality measures across the globe provide empirical evidence on its utility with diverse youth populations. The on-going international efforts in research and practice using the SEHS will further improve its psychometric properties and utility in school settings. Additionally, further validations of the associations between the SEHS results

and youth positive functioning in schools will support educators and school psychologists in identifying and promoting psychosocial strengths among youths to improve their quality of life.

Engagement, Perseverance, Optimism, Connectedness, and Happiness (EPOCH) Model

The EPOCH measure is grounded in Seligman's (2011) PERMA flourishing model, which consists of Positive emotions, Engagement, Relationships, Meaning and purpose, and Accomplishment. The EPOCH measure is a downward extension of Butler and Kern's (2016) PERMA-Profiler used with adults. The EPOCH model defines *Engagement* as the capacity to become absorbed in and focused on what one is doing, in addition to being involved and interested in life activities and tasks (e.g., "When I do an activity, I enjoy it so much that I lose track of time"). *Perseverance* is the ability to pursue one's goals to completion despite challenges (e.g., "Once I make a plan to get something done, I stick to it"). *Optimism* refers to one's hopefulness and confidence about the future marked by a tendency to have a positive outlook on life (e.g., "In uncertain times, I expect the best"). *Connectedness* is the sense that one has satisfying relationships with others, believes that one loves, values, and provides friendship or support to others (e.g., "When something good happens to me, I have people who I like to share the good news with"). *Happiness* is one's steady feeling of content with life, which is associated with a positive mood (e.g., "I feel happy"). Kern and colleagues (2016) posited that facilitating these psychological characteristics during adolescence promotes, and possibly predicts, adult flourishing based on PERMA's theory of well-being.

EPOCH Psychometric Properties

Kern and colleagues (2016) developed the EPOCH scale by selecting 60 items from comparable measures related to the aforementioned EPOCH characteristics. To develop a parsimonious measure, 10 sample groups of middle- to upper-income youths ages 10-18 from the U.S. and Australia were compiled. Based on measurement functioning across different sample groups and across time, the final EPOCH scale retained 20 items, with four items per subscale. Confirmatory factor analyses (CFA) indicated that there were adequate fit indices, favoring a five-factor model, rather than a single-factor or a higher-order latent model. Overall, good internal consistency estimates (Cronbach's alpha) were reported for the full

scale across sample groups (Kern et al., 2016). Table 3 provides a summary of key psychometric studies documenting the reliability and validity of the EPOCH scale[5].

With respect to concurrent validity evidence, Kern and colleagues (2016) reported that the EPOCH subscales were negatively correlated with measures of depression, anxiety, and aggression. Despite the varying degrees of positive correlations with other constructs, the EPOCH subscales were positively associated with higher self-reported physical vitality, self-rated academic performance, and life satisfaction. As such, researchers suggested that the characteristics measured by the EPOCH scale could be used to assess positive psychological functioning of youth and to predict well-being in adulthood via PERMA theory based on previous longitudinal studies.

EPOCH: Research in Schools

Given the significance of well-being as it relates to youth life satisfaction and success, researchers have incorporated the EPOCH framework for well-being in schools. In Australia, the foundation for a multidimensional whole school framework based on PERMA theory was applied at an all-boys school to determine the ways well-being impacted the learning community, physical health, and job outcomes (Kern, Waters, White, & Adler, 2015). To assess overall school climate factors, students anonymously completed the measure, and results indicated that higher EPOCH scores were found to be positively related to students' physical health. Similarly, researchers in the United Kingdom used the EPOCH to survey youth from the Americas, Asia Pacific, Europe, and the Middle East with the goal of understanding how school curricula might be modified to foster students' well-being (Cooker, Bailey, Stevenson, & Joseph, 2016).

A Slovakian version of the EPOCH was used to explore relations among high school students' academic perceptions, social perceptions, and well-being through school belonging (Šeboková, Uhláriková, & Halamová, 2018). The results showed that school belongingness mediated self-competence and well-being in which high self-competence was related to higher levels of connectedness, optimism

[5] *Measure available online at:* http://www.peggykern.org/uploads/5/6/6/7/56678211/epoch_measure_of_adolescent_well-being_102014.pdf

and happiness among youth. These studies highlight the relevance of EPOCH being used as an outcome measure and applied in education settings to establish supportive environments, facilitate learning, and improve youth outcomes.

EPOCH Current Status and Future Considerations

Rose et al. (2017) asserted that the promotion of positive psychological well-being among adolescents is of, "great public health and social significance" (p. 2360). For this reason, these researchers identified several scales aimed to measure mental well-being — they found the EPOCH to be one of four scales with promising positive evidence of validity for use among youth. Though the EPOCH shows strong theoretical and empirical foundations, its psychometric properties need further evaluation for order effects, use among special populations, and language translations as it appears that there is great interest in developing a measure of well-being that is internationally useful (Kern et al., 2016).

FROM RESEARCH TO PRACTICE:

APPLICATION WITHIN DIVERSE SCHOOL CONTEXTS

Thus far, this chapter has been focused on describing and reviewing comprehensive strength-based assessments that can be used to monitor youths' well-being. In addition to understanding the theoretical underpinnings and psychometric support for each of the reviewed measures, it is also critical for practitioners and researchers to understand how these comprehensive strength-based assessments may be used in school-based practice. In general, information obtained from these assessments may be used to monitor the well-being of individual students and can also be used to monitor the well-being of an entire population, taking a public health approach to assessment (Dowdy, Ritchey, & Kamphaus, 2010). Often, schools are interested in using data to help individual students, while also simultaneously being interested in aggregating results to provide population-based information about the broader school population. For example, individual-level results on the SEHS-S may suggest that a particular student may benefit from additional asset-building preventions or early interventions. Additionally, population-level results may highlight that the ninth-grade cohort of males does not feel particularly bonded to the school, suggesting a targeted intervention to increase school belongingness may be especially indicated at the ninth-grade

level. Individual and aggregated population-based information can be used in tandem to help school-based practitioners' direct resources appropriately for both students and school systems.

For both individual and population-level assessment goals, schools need a more comprehensive way of measuring wellness. The measures discussed in this chapter thus far have been useful for research (Moore, Dowdy, Nylund-Gibson, & Furlong, 2019a, 2019b; Moore, Mayworm, Stein, Sharkey, & Dowdy, 2019), but are also valuable for providing schools with readily-available tools to assess and monitor the well-being of students. In order to demonstrate how these measurement tools have been used comprehensively in practice, we provide two brief overviews on the use of the SEHS-S across two unique school-based contexts, one in the United States and the other in Spain. These examples may be more intensive than what all schools may choose to do, but these examples demonstrate how schools are helping make the transition from research to applied practice. In particular, these selected case examples demonstrate how comprehensive strength-based assessments are being integrated within school service delivery models to effectively plan for and deliver interventions. These approaches are consistent with the importance of emphasizing data-based decision making to efficiently and effectively allocate resources and supports.

Illustrative School-Based Applications

Illustration 1: California Local Education Agency Context

The Flores School District, located in an urban Southern California community, enrolls more than 13,000 students across 20 schools. The SEHS-S is administered as a universal monitoring measure to the students in Grades 7, 9, and 10. During the 2018-19 academic year, 2,912 students completed the SEHS via an online format during the first semester. Screening and responding to students' needs was coordinated and provided by school employed mental health professionals and professionals provided by collaborating community mental health agencies. These professionals included 14 school counselors, six school psychologists, and five community mental health professionals.

Education Agency's Wellness Assessment Goals

In 2017, the education agency began discussing and developing their student mental health

framework and multitiered systems of support (MTSS) to address student behavioral and mental health concerns and improve psychosocial strengths. The district's mental health framework focuses on three tiers:

- Tier 1 supports a positive school climate and promotes well-being and psychosocial resilience for all youth;
- Tier 2 focuses on selected and brief evidenced based strategies to support some students (approximately 15%) at risk of, or with mild mental health challenges; and
- Tier 3 offers intensive, ongoing strategies to support those few students (approximately 5%) with significant coping, functioning, and recovery needs, including referrals to school employed mental health professionals and school based mental health providers.

Student Wellness Screening and Follow up

At the Tier 1 level, after obtaining parental consent, all students were asked to complete the social emotional screening assessment, which included the SEHS-S, the Student Emotional Distress Scale (SEDS; Dowdy et al., 2018), and brief measures of life satisfaction and school belonging. The SEHS-S and the SEDS were employed to evaluate students' psychosocial wellness using a dual-factor (Suldo & Shaffer, 2008) complete mental health model which includes a balance of both distress and strength indicators. Students who reported experiencing elevated past month personal distress on the SEDS (among the top 15% of peers) and who reported low levels of SEHS-S personal strengths (among the lowest 15% of peers) were identified for Tier 2 school support services — across eight secondary schools 3% to 10% of students screened positive.

The high-need students were individually interviewed by site administrators, school counselors, school psychologists, and school-based mental health agency personnel within a few days after taking the survey to clarify needs and link to available services. Interviewers were asked to thank the student for their participation, commend the student on being a positive social change agent by participating in the survey, and provide information to the student on their SEHS-S profile strengths. For the highest need students, a structured interview form documenting the youth's comments was later used to identify areas

of concern, available site resources, and the mental health service gaps within the school and community.

Screening Effects on Education Agency Programs and Services

Principals and school team interviewers were invited to a debriefing meeting after all surveys had been completed and students with elevated risk profiles had been interviewed. The meeting began with a discussion of successes and challenges in the process, student and school climate results, and follow-up comments regarding those students with elevated risk profiles. Challenges to the survey process were noted with the goal of improving the process for the 2019-2020 school year. Towards the end of the debriefing meeting, a school wellness action plan was developed and given out to school site teams. Teams discussed screening results with respect to their school climate and the concerns of students with elevated risk profiles. Next steps include district office mental health administration meeting with each school site team to go over their wellness action plans by defining their strengths and concerns, analyzing their student group results, and timelines in achieving their tiered student mental health support goals. Additionally, school site wellness action plans will be shared with the district leadership team for future professional development for site administration, school employed mental health staff, and parents. School based mental health agencies will work collaboratively with school sites to develop parent workshops and Tier 2 student support groups. Overall, this district exemplifies how the comprehensive assessment of youth psychosocial strengths (and distress) can be used to inform multitiered systems of support for all students within a school district.

Illustration 2: Strengths-Based Assessment in Diverse Spanish School Ecosystems

Until a few years ago, school-based preventive interventions for mental health in Spain have focused on detection, identification and early intervention exclusively targeting the presence of psychological problems. Recently, assessment approaches have focused not only on identifying the presence of distress and risk factors, but also psychosocial strengths or resources. Since 2016, the Covitality-Spain team has been implementing psychological assessment practices including strengths and difficulties in children, adolescents, and university students. The survey instruments were administered online school-wide within a universal prevention framework. A primary aim in these studies was to

collect additional validity information for use of the SEHS-S measure with a population of Spanish youth.

Among adolescents, the first study involved 1,042 high school students, and included distress and strength variables. Findings indicated that Covitality was negatively associated with internalizing and externalizing symptoms, as well as with peer and parent relationship problems. Large, positive associations were found with measures of positive covariates (well-being, health-related quality of life, and prosocial behaviors). A subsequent longitudinal study collected data from a sample of 5,172 secondary and high school students from southeastern Spain (Region of Murcia and Province of Alicante). Distress, well-being, health-related quality of life, psychopathology, and relationships with parents, among other variables, were examined. Results indicated that social emotional competences predicted psychosocial adjustment and mediated the influence of stressful events on psychosocial adjustment. Additionally, SEHS-S results have been used to create group and individual reports to identify adolescents who present risk for suicide and/or low mental health. Overall, the comprehensive assessment of strengths among Spain has helped inform the use of strength-based measures while also providing data to inform prevention and intervention services for individuals and groups.

CONCLUSION

Strength-based assessment offers a complementary evaluation component for treatment modalities, such as solution-focused therapy (Rashid & Ostermann, 2009). Other scholars have identified over 140 tools with acceptable psychometric properties that may be incorporated into strengths-based assessment practices to assess a variety of positive attributes among diverse populations (Simmons & Lehmann, 2013). This chapter examined three recently developed comprehensive measures that can be used schoolwide to monitor multiple psychosocial strengths of all students. Having stated this, we recognize that there are unique strengths and weaknesses of these measures. Insert 1 provides key resources that educators can openly access to carefully consider which psychosocial strength and asset measures would be optimal for use in each school context. As with any contemporary approach to assessment, we look forward to continued progress in the comprehensive assessment of youths' psychosocial strengths.

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Table 1. *Summary of Key Engagement, Perseverance, Optimism, Connectedness, and Happiness Measure Psychometric Studies*

Study	Grade	Gender	Sample	Reliability [b]		Validity [c]
Kern et al. (2015)	8–11	100% M	Australia	Engagement	.68	*Structural:* Acceptable fit five-factor model
				Perseverance	.83	
N=514				Optimism	.77	*Concurrent:* EPOCH-E with School Engagement (.56), EPOCH-P with Grit (.78), EPOCH-O with Hope (.75), EPOCH-H with PANAS-P (.71)
				Connectedness	.78	
				Happiness	.86	
Kern et al. (2016) 10 samples combined	7–12	Range [a]	USA Australia	Engagement	.74-.77	*Structural:* Acceptable fit five-factor model
				Perseverance	.79-.80	
				Optimism	.76-.81	*Concurrent:* Depression (-.13– -.53) Anxiety (-.02– -.36), Aggression (-.04– -.44), Physical Vitality (.34–.58), Academic Performance (.29–.53), Life Satisfaction (.36–.83)
				Connectedness	.77-.81	
N=3,826				Happiness	.83-.86	
				Overall	.90-.92	
Loton & Waters (2017)	10-18 years	59% M 41% F	Australia	Engagement	—	N/A
				Perseverance	—	
				Optimism	—	
N=11,138				Connectedness	—	
				Happiness	.89	
Sebokova et al. (2018)	9	38% M 62% F	Slovakia	Engagement	.76/.78[d]	*Structural:* Acceptable fit five-factor model
				Perseverance	.73/.69	
				Optimism	.77/.77	
N=248				Connectedness	.80/.83	
				Happiness	.86/.87	
Kern et al. (2018)	9-19 years	55% M 45% F	China Western	Engagement	.77/.77[e]	*Structural:* Acceptable fit five-factor model; invariance gender, age, and country
				Perseverance	.79/.80	
N=3,620 (China)				Optimism	.77/.81	
N=3,098 (Western)				Connectedness	.77/.80	
				Happiness	.90/.87	

[a] The researchers used 10 sample groups; percentages are reported separately for each sample in Kern et al. (2016, p. 23).

[b] All reliabilities are alpha coefficients unless otherwise indicated.

[c] All validity coefficients are Pearson correlation coefficients.

[d] Reliability coefficients reported based on 6-month test-retest.

[e] Chinese/Western Omega coefficients

Note. EPOCH-E = Engagement; EPOCH-P = Perseverance; EPOCH-O = Optimism; EPOCH-H = Happiness.

Table 2. *Summary of Key Social Emotional Health Survey Psychometric Studies*

Study	Grade	Gender	Sample		Reliability [a]		Validity [b]
SEHS-Secondary							
Furlong et al. (2014)	8,10, 12	50% F 50% M	USA Latin Amer.	72%	Belief in Self Belief in Others Emotion Comp. Engaged Living Covitality	n/a n/a n/a n/a .92	*Structural*: Acceptable fit second-order model, invariance gender *Concurrent* [c]: SWB (.89), Academic (.08), School safety (.12)
N=4,189							
You et al. (2014)	9-12	47% F 53% M	USA Latin Amer.	72%	Belief in Self Belief in Others Emotion Comp. Engaged Living Covitality	.76 .81 .78 .87 .91	*Structural*: Acceptable fit second-order model, invariance gender and age. *Concurrent*: BESS (-.63)
N=2,240							
Kim et al. (2014)	10	56% F 44% M	USA Other European Amer. Latin Amer.	50% 24% 12%	Belief in Self Belief in Others Emotion Comp. Engaged Living Covitality	n/a n/a n/a n/a .90	*Structural*: n/a *Concurrent*: SWB (.57)
N=118							
You et al. (2015)	9-12	51% F 49% M	USA Latin Amer. White Amer. African Amer. Asian Amer.	51% 17% 7% 8%	Belief in Self Belief in Others Emotion Comp. Engaged Living Covitality	n/a n/a n/a n/a .95	Structural: Acceptable fit second-order model, invariance gender and race/ethnicity
N=14,171							
Ito et al. (2015)	7-9	52% F 48% M	Japan	100 %	Belief in Self Belief in Others Emotion Comp. Engaged Living Covitality	.78 .87 .82 .88 .93	*Structural*: Acceptable fit second-order model, invariance gender
N=975							
Lee et al. (2016)	7-12	56% F 44% M	Korea	100 %	Belief in Self Belief in Others Emotion Comp. Engaged Living Covitality	.84 .85 .82 .88 .94	*Structural*: Acceptable fit second-order model, invariance gender *Concurrent*: SWB (.56)
N=686							
Telef & Furlong (2017)	9-12	55% F 45% M	Turkey USA	50% 50%	Belief in Self Belief in Others Emotion Comp. Engaged Living Covitality	.76 .77 .74 .80 .89	*Structural*: Latent mean differences on belief-in-self domain (ES = .16) *Concurrent*: SWB (.66)
N=2,242							
Xie et al. (2018)	7-12	52% F 48% M	China	100 %	Belief in Self Belief in Others Emotion Com. Engaged Living Covitality 3-wk test-retest	.77 .81 .80 .88 .92 .89	*Structural*: Acceptable fit second-order model, invariance gender and grade *Concurrent*: LS (.46), PANAS-P (.46), DASS-D (-.36), DASS-A (-.25), DASS-S (-.22)
N=3,750							

[a] All reliabilities are alpha coefficients unless otherwise indicated.

[b] All validity coefficients are Pearson correlation coefficients or structural equation model path coefficients.

[c] Covitality scores are the sum of all SEHS-S and SEHS-P items.

Note. BESS = Behavioral and Emotional Screening Scale; DASS-D = Depression Anxiety and Stress 21-Depression; DASS-A = Depression Anxiety and Stress 21- Anxiety; DASS-S = Depression Anxiety and Stress 21- Stress; Emotion Comp. = Emotional Competence domain; PSSM-A = Psychological Sense of School Membership-Acceptance; PANAS-P = Positive and Negative Affect Scale-Positive; PANAS-N = Positive and Negative Affect Scale-Negative; PSSM-R = Psychological Sense of School Membership-Rejection; SEHS = Social Emotional Health Survey, Covitality = SEHS-S and SEHS-P total score; SWB = subjective well-being.

Table 3. *Summary of Key Lerner and Lerner 5C Model of Positive Youth Development Questionnaire Psychometric Studies*

Study	Grade	Gender	Sample		Reliability [a]		Validity [b]
Lerner et al. (2005)	5	53% F 47% M	European Amer. Latin Amer. African Amer.	58% 18% 8%	Competence Confidence Connection	.64–.72 .71 .89	*Structural*: Adequate to good fit for second-order model with covarying residual terms
N=1,700			Native Amer. Asian/Pac. Is.	4% 3%	Character Caring	.68–.88 .87	*Concurrent:* NR
Jeličić et al. (2007)	5–6	53% F 47% M	European Amer. Latin Amer. African Amer.	55% 15% 5%	Competence Confidence Connection	.56–.65 .69–.70 .78–.89	*Structural:* Good fit for second-order model covarying residual terms
N=982			Native Amer. Asian Amer.	2% 4%	Character Caring	.68–.92 —	*Concurrent:* Depression (.24), Risk Behaviors (-.35), Contribution (-.58)
Phelps et al. (2009)	5–7		European Amer. Latin Amer. African Amer.	53–67% 11–18% 7–8%	Competence Confidence Connection	.62–.80 .70–.80 .75–.89	*Structural:* Good fit second-order longitudinal model across grades covarying residual terms; sex differences in PYD
N=1,722			Asian Amer. Amer. Indian	3–4% 2–3%	Character Caring	.67–.93 .86–.90	*Concurrent:* NR
Bowers et al. (2010)	8–10	62% F 38% M	European Amr. African-Amer. Latin Amer.	67% 8% 8%	Competence Confidence Connection	.76–.86 .74–.88 .82–.97	*Structural*: Strong fit second-order model, longitudinal invariance across adolescence
N=920			Asian Amer.	3%	Character Caring	.59–.89 .74–.88	*Concurrent:* NR
Lewin-Bizan et al. (2010)	5–10	58% F 41% M	European Amer. Latin Amer. African Amer.	65% 12% 7%	Competence Confidence Connection	.68–.88 .74–.88 .88–.92	*Structural*: Development trajectory mixture model identified good fit four trajectories of PYD, with sex differences in trajectories of PYD
N=2,516			Asian/Pac. Is. Native Amer.	3% 2%	Character Caring	.89–.93 .83–.89	*Concurrent:* NR

[a] Reliabilities are alpha coefficient ranges reported across the included grade levels.

[b] Validity coefficients are structural equation model path coefficients where available.

Note. All study samples were collected in the United States from participants in the longitudinal 4-H study of Positive Youth Development. PYD = Positive Youth Development, NR = Not Reported.

Insert 1. Key Resources to Explore Positive Psychology Assessments for Use in School Contexts

Center for Social Emotional Learning (CASEL) Assessment Guide
CASEL established an assessment workgroup to identify validated measures of social emotional learning (SEL) skills and orientations to include in a SEL assessment guide. This guide includes a catalog of measures and resources for researchers and practitioners to select and use appropriate measures.
Website: https://measuringsel.casel.org/access-assessment-guide/

Children's Worlds: International Study of Children's Well-Being
UNICEF hosted a meeting in 2009 involving researchers from the International Society for Child Indicators (ISCI) to develop a child well-being measure that supported international research. Subsequently, a measure was developed and has been employed in several studies. The latest study includes students (ages 8, 10, and 12) from 40 countries. The measures used in this study are available online.
Website: http://www.isciweb.o rg/

Office of Economic Development Study on Social Emotional Skills
This is an ambitious multi-year project (2016-2020) that set out to carefully define a set of social emotional learning constructs and to craft a measure that can be used internationally. The main study will gather information on students' social and emotional skills; family, school, and community learning contexts; and background characteristics of students, teachers, and parents. The student SEL measurement is grounded in the Big 5 personality model and assesses the following constructs: *Task Performance* (achievement motivation, responsibility, persistence, self-control); Emotional Regulation (stress resistance, optimism, emotional control); *Collaboration* (empathy, trust, co-operation); *Open-Mindedness* (tolerance, curiosity, creativity); *Engaging with Others* (sociability, assertiveness, energy); and *Compound Skills* (critical thinking, metacognition, self-efficacy).
Website: http://www.oecd.org/education/ceri/thestudyonsocialandemotionalskills.htm

Project overview document: Office of Economic Development. (n.d.). Social and emotional skills: Well-being, connectedness and success. Paris, France: Author. Available from, https://www.oecd.org/education/school/UPDATED%20Social%20and%20Emotional%20Skills%20-%20Well-being,%20connectedness%20and%20success.pdf%20(website).pdf

Project Covitality
This multiyear (2016–2020) project was funded by the U.S. Office of Education, Institute of Education Sciences. It focused on the further validation of the Social Emotional Health Survey-Secondary. A cross-sectional sample of more than 25,000 students and a three-year longitudinal sample of more than 1,000 high school students were used in validation studies. These measures support the use of universal school complete social emotional wellness screening and monitoring.
Website: http://www.project-covtality.info

RAND Education Assessment Finder: Measuring Social, Emotional, and Academic Competencies
The RAND research group has created an online searchable resource that education agencies can use to identify measures of social and emotional constructs, including a range of positive psychological constructs. This resource includes a user guide on how to access and search the measure repository and a practitioner guide that education agencies can use to consider which measures best match interests and needs.
Website: https://www.rand.org/education-and-labor/projects/assessments.html

User Guide: Hamilton, L. S., Stecher, B. M., Schweig, J., & Baker, G. (2018). *RAND education assessment finder: User instructions*. Available from, https://www.rand.org/content/dam/rand/pubs/tools/TL300/TL308/RAND_TL308z1.pdf

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