

EXAMINING GIFTED STUDENTS' MENTAL HEALTH THROUGH THE LENS OF POSITIVE PSYCHOLOGY

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The psychological functioning of gifted and talented youth can be conceptualized from a traditional lens that is focused on identification and remediation of within-person problems, or from a modern lens that takes a more holistic view of individuals as also having personal strengths and environmental resources (Wright & Lopez, 2009). This chapter describes a specific modern framework—positive psychology—that was introduced by Martin Seligman and Mihaly Csikszentmihalyi (2000) and intended to change “the focus of psychology from preoccupation only with repairing the worst things in life to also building positive qualities” (p. 5). In describing psychology’s origins pre-World War II, Seligman and Csikszentmihalyi summarized three primary missions of the field—alleviate mental health problems, improve the lives of all people, and cultivate exceptional talent. Initiatives within positive psychology refocused attention to the latter two goals, including via development of strategies to improve happiness among the general public, as well as through research devoted to fostering excellence. Exceptional intellectual ability is one form of excellence in young people (Seligman & Csikszentmihalyi, 2000). The natural linkages between positive psychology and gifted education were explicated in a landmark special issue of the *American Psychologist* that was devoted to positive psychology (Seligman & Csikszentmihalyi, 2000). Some of the invited papers featured in that issue directed attention to the social-emotional functioning of gifted youth (Winner, 2000) and how

to foster intellectual and psychological development among talented students (Lubinski & Benbow, 2000).

In positive psychology, attention is directed toward the personal competencies and environmental resources that facilitate well-being. In particular, three themes run through the original positive psychology framework: (a) individual well-being, including positive emotions and experiences (e.g., happiness); (b) positive individual traits, including personality traits now conceptualized as character strengths; and (c) positive institutions, specifically social contexts such as healthy schools and families that shape individuals’ positive experiences and ultimate societal contributions (Seligman & Csikszentmihalyi, 2000). The review of literature in this chapter is organized around these three primary pillars of positive psychology.

Since the introduction of positive psychology at the turn of the millennium, Donaldson, Dollwet, and Rao (2015) reported that over 1,300 articles pertinent to positive psychology have been published in the professional literature (i.e., 1999–2013). The nature of these papers has evolved from conceptual to empirical, leading Donaldson et al. to conclude that “many psychological researchers have been inspired to investigate topics that illuminate the scientific understanding of factors that enable individuals, communities, and societies to flourish in contemporary times” (p. 192). Although most extant empirical studies examined adults, a sizeable minority (16% of the 771 studies) included samples

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of children and adolescents (Donaldson et al., 2015). Such studies contain growing guidance on issues pertinent to assessment, predictors, and benefits of, as well as interventions to improve, youth well-being. In this chapter, we focus on research that is most pertinent to gifted education. We begin with an overview of the constructs (organized within the three original pillars of positive psychology) relevant to youth, education, and gifted education. First, we offer a working definition of giftedness and gifted education.

IMPORTANCE OF THE TOPIC

Definitions of giftedness vary greatly from state to state and from nation to nation, and reflect the many conceptions of giftedness that abound. Although the federal definition describes gifted individuals as those who “give evidence of higher performance capability in such areas as intellectual, creative, artistic, or in specific academic fields, and who need services or activities not ordinarily provided by the school to fully develop those capabilities” (No Child Left Behind Act of 2001, Title IX, Part A, §9101(22)), states vary greatly in their conceptualization of giftedness and provision of related educational services.

Students who pursue particularly rigorous coursework in the United States (e.g., college-level classes in high school) include those identified as intellectually or academically gifted and talented. In Florida, where we have conducted our research on students pursuing accelerated high school curricula, the state’s gifted identification criteria includes a demonstrated need for the program, evidence that a student exhibits behaviors associated with gifted performance, and a score of 130 or above on an individually administered intelligence test (Florida Department of Education, 2010).

In our previous studies of gifted adolescents, we examined students enrolled in Advanced Placement (AP) courses and students accepted to the International Baccalaureate (IB). Neither of these programs serve exclusively intellectually gifted learners, but gifted students were represented in studies of IB students (Shaunessy & Suldo, 2010) or IB and AP students (Suldo & Shaunessy-Dedrick,

2013). In the case of IB students, we have found the academic functioning (e.g., grades, academic competence beliefs, behavioral engagement at school) of students who had not been identified as gifted is similar to that of gifted students, and superior to the academic functioning of students at the same school who are not enrolled in the IB program (Shaunessy, Suldo, Hardesty, & Shaffer, 2006).

Positive Psychology Pillar: Individual Well-Being

A common theme in the positive psychology literature is determining how to best operationalize personal well-being, then integrating these conceptualizations in the broader discussion of defining mental health as more than the simple absence of problems. Terms such as *life satisfaction*, *happiness*, and *well-being* are often used interchangeably or imprecisely in the literature (Donaldson et al., 2015). Further complicating matters, the primary well-being outcome has shifted from an initial near exclusive focus on aspects of subjective well-being to a broader focus on multiple features of hedonic and eudemonic well-being that are reflected in PERMA theory (Seligman, 2011). Subjective well-being entails “a person’s cognitive and affective evaluations of his or her life as a whole” (Diener, Oishi, & Lucas, 2009, p. 187). Subjective well-being is comprised of life satisfaction (i.e., global appraisal of the personally salient domains of one’s life, such as satisfaction with family, friends, and school/work) and frequency of positive emotions and moods (e.g., excited, cheerful, interested) relative to negative emotions (e.g., sad, ashamed, scared). Students with high subjective well-being would generally agree that their life is going well, and experience positive emotions more frequently than negative emotions. Perhaps because of its more stable nature, life satisfaction is the component of subjective well-being that has been studied the most among youth samples. Nevertheless, the importance of positive moods is made clear by classic research within the broaden-and-build theory, which establishes that positive moods cause an upward spiral that facilitates creative problem-solving and builds cognitive resources (Fredrickson, 2001). When this theory was applied to high school

students, it confirmed that youth who felt more cheerful at school (because of feeling connected and engaged) incurred more positive experiences at school (Stiglbauer, Gnams, Gamsjäger, & Batinic, 2013).

Seligman (2011) urged psychologists and researchers to attend to five elements of well-being rather than to equate well-being with the presence of positive emotions. The PERMA acronym stands for positive emotion (including subjective well-being, as indicated by life satisfaction and positive affect, including feelings of happiness), engagement, relationships, meaning, and achievement/accomplishment. Gifted youth, by definition, experience achievement in school realms. The overarching goal for an individual student's well-being is flourishing, as indicated by high levels of multiple elements of PERMA (Seligman, 2011).

Modern conceptualizations of positive mental health during youth involve recognition that well-being and mental illness are related, but separate, dimensions (Keyes, 2006; Suldo & Shaffer, 2008). Those lines of research have illustrated the importance of the well-being factor through identifying the wide variety of youth outcomes with which it is associated. For instance, among youth without elevated levels of mental health problems, adolescents with high subjective well-being have better social relationships, physical health, and positive attitudes about school than their peers who report low subjective well-being (Suldo & Shaffer, 2008; Suldo, Thalji-Raitano, Kiefer, & Ferron, 2015). Such findings support the notion that the most appropriate goal for psychologists is to identify not the mere absence of mental illness; instead, the combination of high subjective well-being and minimal symptoms of mental health problems predicts the best concurrent and later adjustment (Greenspoon & Saklofske, 2001; Lyons, Huebner, & Hills, 2013; Suldo, Thalji, & Ferron, 2011). In line with this mounting support for subjective well-being as a key indicator of mental health, growing research attention has focused on understanding the mean levels of subjective well-being, and the primary determinants of it, among general samples of youth as well as subgroups of interest to educators and psychologists (e.g., gifted students).

Correlates of individual well-being. Findings from a growing number of studies that examined youth on a single occurrence or across time have generally confirmed that a core set of variables covary with differences in children's and adolescents' levels of subjective well-being (Suldo, 2016). The most robust correlates (sometimes conceptualized as determinants) of youth happiness include internal qualities, as well as social relationships and resources. Internal correlates of high subjective well-being include positive mindsets (e.g., self-confidence, optimism), engagement in prosocial or goal-directed activities, satisfactory physical health, financial resources sufficient to meet basic needs, and personal abilities and skills used to cope with adverse experiences and achievement in areas like education. With respect to key environmental correlates, youth with high subjective well-being often experience supportive relationships with family members, friends, classmates, and teachers; safety and security in primary settings like schools and neighborhoods; and relatively low stress in terms of major life changes (e.g., death of a loved one) or chronic stressors (e.g., frequent arguments with friends or family members). In accord with the understanding that multiple areas of life contribute to students' happiness, multidimensional approaches to measuring youth life satisfaction consider students' satisfaction in five key domains: school, family, friends, living environment, and self (Huebner, 1994).

Unique predictors of individual well-being. In qualitative studies, in which students were asked to describe factors pertinent to their subjective well-being, youth have responded by generating lists of determinants from a remarkably similar set of broad categories robust to respondent demographic features, like age and nationality (for a summary of this research, see Suldo, 2016). Absent from the literature are comprehensive studies of the extent to which the correlates predict subjective well-being for gifted students in a manner similar to general samples of students. In an exception, Ash and Huebner (1998) found that, although gifted and nongifted middle school students reported comparable levels of domain-specific and global life

satisfaction, the two groups varied in the way individual domains related to their appraisal of life overall. In particular, satisfaction with school accounted for a greater portion of unique variance in global life satisfaction among gifted students. Although school satisfaction contributes relatively little to overall life satisfaction among nongifted students (Dew & Huebner, 1994), gifted students attribute more of their overall life satisfaction to school, which is consistent with their heightened academic talents and accompanying success. This may be particularly beneficial as gifted students with high school satisfaction report more positive emotions and optimistic thoughts than those with low school satisfaction, and their elevated level of positive affect stays relatively stable even when levels of negative feelings increase (Hoekman, McCormick, & Gross, 1999). Gifted students who are more satisfied with school also demonstrate more intrinsic motivation, whereas gifted students with lower school satisfaction maintain low intrinsic motivation regardless of their level of burnout, reflecting learned helplessness (Hoekman et al., 1999). Given the salience of school satisfaction to overall life satisfaction among gifted students, and the benefits realized by students who are more satisfied with school, educators should be attuned to school satisfaction as an outcome of efforts to create an optimal learning environment for students.

Positive Psychology Pillar: Individual Character Strengths

Just as the pathology-focused years of psychology have led to refinements in the major classification system of mental health problems (e.g., *the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition*; American Psychiatric Association, 2013), a primary aim of positive psychology has been to coherently identify and categorize human strengths of character. The classification system that resulted from the Values in Action (VIA) project includes 24 positive traits that are cross-culturally valued and grounded in moral principles. Conceptually, these 24 character strengths are organized into six virtues: wisdom and knowledge, courage, humanity, justice, temperance, and transcendence (C. Peterson & Park, 2009). For example, open-mindedness is

defined as a frequent tendency to examine an issue from all sides to think about the issue critically and thoroughly, which falls under the category of wisdom and knowledge, as it encompasses cognitive strengths that are involved the acquisition and use of knowledge.

Through completion of the VIA inventory of strengths, individuals can quickly explore their top strengths. (The VIA survey is available online, with versions for children and adults; see <http://www.viacharacter.org>.) The VIA children's survey is commonly used to develop an individual profile of ranked character strengths. A student's unique profile of "signature" strengths (i.e., top five character traits) contains positive traits that are frequently exhibited by the student, highly regarded, and individually celebrated (C. Peterson & Seligman, 2004). In describing the centrality of character strengths to all aspects of well-being, Seligman (2011) contended that deployment of any of the 24 strengths captured in the VIA framework promotes engagement, as well as engenders more positive emotion, meaning, accomplishment, and better relationships.

Shoshani and Slone (2013) found that strengths in the areas of temperance (e.g., self-regulation, prudence, perseverance) and knowledge (e.g., strengths of the "head" or "mind," such as love of learning, curiosity, open-mindedness) have the strongest associations with middle school students' academic success as indexed by their grade point averages (see Chapter 38, this handbook). Strengths of the "heart" (e.g., kindness, social intelligence) co-occur with better cognitive and behavioral engagement at school, as do the strengths reflecting temperance and knowledge. Strengths of all types are tied to greater positive affect and/or life satisfaction (Shoshani & Slone, 2013). School-based interventions that have used the VIA classification system during programs to cultivate individual students' strengths, and to encourage the recognition of such strengths in others, have been credited with improving positive emotions and engagement among elementary school students (Quinlan, Swain, Cameron, & Vella-Brodrick, 2015) and life satisfaction in middle school students (Proctor et al., 2011).

Salmela and Uusiautti (2015) examined the signature character strengths of the highest-achieving

graduates from upper levels of secondary education in Finland. The sample of 14 youth performed in the top 1% on national matriculation examinations. Participants wrote about their schooling histories, including their perceived strengths, successes, and adversities. Half of the sample took part in follow-up interviews intended to gather more information about how these students achieved at such a high level. Thematic analysis of the qualitative data indicated the presence of 10 character strengths, representing each of the six virtues from the VIA classification system. These students' narratives reflected strengths in the area of wisdom and knowledge (i.e., curiosity and a love of learning), courage or mental fortitude (i.e., bravery, perseverance, and authenticity), and humanity (i.e., love [valuing of close relationships] combined with a desire for fairness). In sum, these exceptionally high-achieving students were similar in their high thirst for knowledge and passion for learning, coupled with grit and autonomy, and appreciation for the support that stemmed from social relationships. This initial research suggests that character strengths among gifted youth are interconnected, strengthen each other, and facilitate students' success in academic endeavors.

Positive Psychology Pillar: Institutions That Promote Individual Strengths and Well-Being

Given the salience of character strengths and well-being to students' success, a logical question becomes how to create environments that foster these positive experiences among gifted children and adolescents. In the educational context, schools can promote access to like-minded peers who are apt to be driven, inquisitive, and pensive through grouping of students in accelerated coursework (Winner, 2000). Outside-of-school options include summer programs and residential schools for gifted students, which also provide avenues to interact with other like-minded peers.

In addition to potential social benefits and enhanced feelings of belongingness, providing gifted youth with an individualized and often accelerated learning environment that provides an "appropriate developmental placement" (Lubinski & Benbow,

2000, p. 138) is also essential in increasing students' flow experiences. Csikszentmihalyi coined the term *flow* to refer to peak experiences in which people are deeply absorbed in a task that is challenging, but proportional to one's skills and strengths; during such periods of absorption in demanding tasks, time seems to "stand still" or "fly by" (see Chapter 14, this handbook). In positive psychology, complementing or even forsaking momentary pleasures by engaging in more flow experiences through enacting personal strengths (e.g., love of learning, perseverance, prudence) is a primary mechanism by which personal happiness is increased (Seligman, 2002). Applied to education, the psychological well-being of gifted youth is likely to be enhanced as a function of the time they spend in learning activities that compel or inspire high levels of concentration, interest, and enjoyment (Shernoff, Abdi, Anderson, & Csikszentmihalyi, 2014). For gifted students, such cognitive engagement in learning is more likely to be apparent in classes in which the curriculum is well-matched to their advanced ability level, while being relevant to the students' interests and goals. In the case of gifted adolescents, lofty educational aspirations and an intrinsic love of learning are common. Accordingly, many educators have conceptualized college-level courses—AP classes and IB programs—as a high school curriculum particularly well-suited to gifted students. The accelerated pace and advanced content may (a) be met enthusiastically by students who have a thirst for knowledge and a tenacious spirit (Salmela & Uusiautti, 2015), (b) increase the likelihood of flow experiences at school, and (c) contribute to greater satisfaction with school. This notion is supported by Jin and Moon's (2006) comparison of school satisfaction ratings with very high-achieving Korean youth who attended either a residential high school for high-ability students, which provided an accelerated science-oriented curriculum ($n = 111$), or a regular high school ($n = 188$). School satisfaction was significantly higher among students at the science-oriented school, and students expressed particularly positive feelings about their academic program (i.e., advanced curriculum) and their teachers. Interestingly, the overall psychological well-being of the two groups of students was comparable (as

indexed using a self-report measure that captured hedonic and eudemonic elements of well-being), underscoring the notion that students' happiness is determined by experiences in many domains of life beyond school.

To understand the need for such contexts, and the unique features of youth in such accelerated contexts, the next section summarizes findings from prior and current research pertinent to the mental health of gifted students. Given our interest in positive indicators of well-being, we focus on recently published studies from the growing body of literature examining an array of social-emotional issues affecting gifted students' academic and affective development through a positive psychology lens.

RESEARCH REVIEW

The body of research focused on gifted, high-achieving, and talented individuals addresses the cognitive and affective needs of these individuals, although the former is more widely discussed than the latter, particularly with respect to the identification of students for gifted programming (Dai, Swanson, & Cheng, 2011). Pioneers in the research of affective needs of gifted and talented students can be traced back to the early 1900s.

Prior Research on the Mental Health of Gifted Students

In his longitudinal study of more than 1,000 gifted individuals, Terman (1925) investigated a range of cognitive and affective considerations, including the social-emotional adjustment of gifted individuals. In contrast with prevailing beliefs about gifted individuals of that time, he found that gifted students were well-adjusted, stable youth. Although Terman's sampling and subsequent claims about gifted children were later questioned and criticized for misrepresentation of the social-emotional needs of gifted children (Kerr, 1981; Webb, Meckstroth, & Tolan, 1982), his work remains foundational in establishing research related to the mental health of gifted youth. Hollingworth (1942) built on Terman's work and later substantiated the claim that gifted children are well-adjusted emotionally. Through her longitudinal case studies of gifted children, however, she

also found that students with IQs over 150 were more likely to experience adjustment challenges than gifted individuals with lower IQ scores. Hollingworth attributed these difficulties to boredom with the typical school curriculum, lack of access to peers of similar cognitive abilities with whom to develop and refine social skills and friendships, and dissonance experienced from having the intellectual age of an adult and the emotional age of a child.

More contemporary research has explored an array of social-emotional issues affecting the gifted learner's academic and affective development. Notably, J. S. Peterson (2006) explored proactive and responsive approaches for a host of social-emotional issues, Neumeister, Williams, and Cross (2009) considered perfectionism among gifted youth, and Mueller (2009) studied depression in gifted and talented individuals. Trotman Scott (2012) asserted that such discussions of affective needs of gifted learners often neglect social-emotional issues particular to African American students that may be compounded because of their giftedness (e.g., negative peer pressure, Fordham & Ogbu, 1986; racial identity issues, Cross & Vandiver, 2001). Other affective issues that have been explored include interpersonal relationships (e.g., Matthews & Kitchen, 2007), the role that giftedness plays in moderating deleterious outcomes for children and adolescents (e.g., Neihart, 1999), and students' psychological well-being (e.g., Jin & Moon, 2006).

In addition to such literature, J. S. Peterson (2006) argued cogently for the inclusion of affective needs of the gifted in counselor education programs, emphasizing the importance of attending to the unique needs of special populations of gifted learners, including underachieving gifted and highly gifted students, and to educate adults in the complexities of giftedness as a risk factor (2009). In response to the compelling arguments of researchers, the National Association for Gifted Children (2009) issued a white paper that outlines the range of affective issues relevant to this diverse population, with charges for researchers, educators, psychologists, and counselors to remain aware of these issues, invest in additional research to explore less widely-investigated areas, and promote the understanding of an array of considerations, including

needs of underrepresented populations, mental health issues, nonassets, and personal strengths.

Examining gifted students' mental health using traditional indicators of problems. As with the general population of youth, the mental health of gifted students has been assessed from a problem-focused lens targeting symptoms of internalizing (e.g., depression, anxiety) and externalizing (e.g., aggression, conduct disruptions) problems. For example, one study that compared the psychosocial functioning of general education students ($n = 113$) with students pursuing rigorous high school coursework ($n = 367$) confirmed that students in accelerated curricula (IB programs or AP classes) reported higher levels of stress than students in general education curricula (Suldo & Shaunessy-Dedrick, 2013). Although stress is often accompanied by increased symptoms of psychopathology, prior work has indicated that high school students in IB programs ($n = 122$) had fewer symptoms of externalizing behaviors and less affiliation with rule-breaking peers than the students in general education ($n = 176$), as well as similar (i.e., not elevated) levels of social problems and internalizing symptoms of psychopathology (Shaunessy, Suldo, Hardesty, & Shaffer, 2006). Such findings support the notion that gifted students served in an appropriate developmental placement (i.e., accelerated curricula) may not be at elevated risk for suffering emotionally, even if they endure greater stress associated with the intense academic demands that are inherent to their AP classes or IB program.

Examining gifted students' mental health from a positive psychology perspective. To date, the majority of research on the potential affective needs of gifted students has centered on vulnerabilities and deficits related to suboptimal academic and mental health outcomes. With the inception of the positive psychology movement, educational scholars and practitioners have sought to identify and promote positive indicators of well-being among students in schools, including those of gifted students.

Indicators of subjective well-being. Although relatively few studies have examined the subjective well-being of advanced students, extant research demonstrates that gifted and high-achieving students

have similar superior well-being compared with their nongifted peers. For example, comparisons of domain-specific and overall life satisfaction between gifted students in an IB program, high-achieving students not identified as gifted in IB, and students not identified in gifted in general education suggested that IB and general education students differ in satisfaction on two domains: living environment and friends (Shaunessy et al., 2006). Specifically, gifted and nongifted students in IB programs reported significantly higher satisfaction with their living environments, and those IB students identified as gifted reported higher satisfaction with friends, relative to their peers in general education. Students in IB programs and students in general education were similarly satisfied with their lives overall, as well as in the domains of self, school, and family. The finding that students in IB programs are more highly satisfied with their friends also emerged in a more recent examination of life satisfaction among a larger sample of students (Suldo & Shaunessy-Dedrick, 2013). Although students in IB programs, AP courses, and general education courses had comparable levels of overall life satisfaction, as well as comparable levels of satisfaction in the domains of self, school, family, and living environments, students in IB programs reported significantly higher satisfaction with friends. Entering the IB program as part of a cohort, traveling to classes with the same group of students, and greater exposure to like-minded peers may contribute to this elevated happiness in the friend domain. Findings from qualitative research further support that high school students in college-level courses find comfort in interacting with peers with similar levels of academic talent, which may facilitate stronger satisfaction with friendships (Park, Caine, & Wimmer, 2014).

In addition to greater satisfaction with friendships, gifted and academically talented students may also experience elevated levels of positive affect, as evidenced by Merrell, Gill, McFarland, and McFarland's (1996) comparison of gifted and nongifted students in grades 3 through 6. Although their investigation aimed to identify differences in symptoms of internalizing problems, data from the Internalizing Symptoms Scale for Children (Merrell & Walters, 1996) yielded two distinct

scales—emotional distress and positive affect. Gifted students reported significantly greater levels of positive affect indexed by ratings of positive emotions (e.g., feel cheerful, important, energetic, happy) and self-perceptions (e.g., “I do well in school,” “I like myself”). More research is needed to determine if such heightened positive emotions and self-concept among gifted students may serve to protect them from developing symptoms of internalizing problems, along the lines of prior research that has demonstrated a protective function of high subjective well-being among general samples of youth (Lyons et al., 2013; Suldo et al., 2011).

Correlates of subjective well-being. Positive psychological constructs that are correlated with subjective well-being and have been examined among samples of gifted youth include optimism, perfectionism, and school satisfaction associated with specialized academic settings. For instance, Pajares (2001) found that high-achieving middle school students had higher levels of optimism and authenticity than low-achieving students, contributing to higher academic motivation and subsequent achievement. Hoekman, McCormick, and Barnett (2005) further demonstrated the importance of positive emotions and optimistic thoughts in academically gifted students’ educational pursuits; this cluster of positive feelings was significantly associated with seventh grade students’ intrinsic and extrinsic motivation, and exerted direct effects on greater satisfaction with school, as well as indirect effects on commitment to schoolwork through the positive influence on motivation and inverse association with feelings of burnout. Taken together, holding expectations for favorable outcomes in the future may help gifted youth maintain high motivation for achievement, in part because optimistic students attribute failure to external sources rather than personal shortcomings (Seligman, 2002) and feelings of optimism co-occur with positive emotions that create an upward spiral of cognitive and social resources (Fredrickson, 2001).

Chan (2012) compared the mindset and well-being of teacher-nominated gifted Chinese primary and secondary students who were clustered into three categories (nonperfectionists, unhealthy perfectionists, and healthy perfectionists) according to

their levels of two aspects of perfectionism—high standards and discrepancy between standards and performance. Findings indicated that gifted students who were healthy perfectionists (high standards, low discrepancy) had greater happiness levels than unhealthy perfectionists (high standards, high discrepancy). Gifted and high-achieving students’ perfectionistic tendencies were not necessarily maladaptive, as happiness levels were similar among the groups of healthy perfectionists and nonperfectionists (neither high standards nor discrepancy). Further, in the combined sample, small but significant positive correlations were observed between high standards and life satisfaction ($r = .13$) and happiness ($r = .13$). In contrast, a greater discrepancy between one’s standards and level of performance was associated with less happiness and lower life satisfaction ($r = -.22$ and $-.31$, respectively).

Investigations of gifted and high-achieving students also demonstrated that environmental factors (e.g., educational settings) contribute to students’ domain-specific happiness. Compared with gifted and high-achieving students enrolled in regular high schools, greater school satisfaction has been detected among American students attending a partial-day Governor’s School (Robertson, 2013) and among Korean students attending a residential science-oriented school (Jin & Moon, 2006). Despite the students’ particularly positive feelings about their teachers and academic program, neither study found significantly higher levels of subjective well-being (Robertson, 2013) or psychological well-being (Jin & Moon, 2006) among the subgroup of students attending the specialized school. In the case of the American study, the group of students who attended a Governor’s School reported lower academic self-perceptions as compared with students who attended general education high schools. These findings are consistent with the big-fish-little-pond effect, whereby high-achieving students experience higher academic self-concepts in heterogeneous educational settings, and lower academic self-concept in more rigorous school environments (Marsh, Chessor, Craven, & Roche, 1995; Marsh & Hau, 2003). For gifted students in specialized academic settings, the potentially negative influence of diminished academic self-concept

on students' subjective well-being may be offset by the potentially positive influence of elevated school satisfaction.

Recent Research on the Positive Mental Health of Gifted Adolescents

To further examine the mental health of gifted adolescents, this section presents findings from analyses of a large dataset derived from a project funded by the U.S. Department of Education's Institute for Education Sciences. The overarching purpose of the project was to examine factors associated with risk and success (with regard to mental health and academic achievement) among adolescents in AP and IB courses (Suldo & Shaunessy, 2010). Participants in the cross-sectional dataset included 2,379 students enrolled in AP classes ($n = 1150$) and IB ($n = 1229$) from 20 large public high schools in five diverse districts in a single state. Per school records, 28.2% of participants had been previously identified as intellectually gifted ($n = 670$). The remaining 71.8% of the sample is considered high-achieving (i.e., met school entrance requirements for college-level courses), but not identified as gifted ($n = 1,706$). Three students whose gifted status was unknown were excluded from the analyses. Students in the larger sample were evenly distributed across grades 9 through 12 and were diverse with respect to gender (38% boys), SES (62.6% of mothers and 54.4% of fathers had college degrees or higher), race (55.8% Caucasian; 13.3% Asian; 12.3% African American; 7.3% other ethnic background; 11.4% multiracial), and ethnicity (16.9% Hispanic or other Spanish origin). In the spring of 2012, participants completed self-report surveys assessing the constructs of interest (e.g., stressors and coping strategies, parent support for learning, connections to people at school, engagement in learning, mental health). Data collected from each participant's school records pertained to academic performance in classes, AP or IB exam scores, and educational experiences during middle school.

Given the relatively small body of empirical studies relevant to gifted students' subjective well-being, we conducted additional analyses of this archival dataset to first explore the mental health of gifted high school students in accelerated curricula. To shed

light on significant and particularly salient correlates (i.e., possible determinants) of subjective well-being for gifted high school students, we also examined bivariate and multivariate associations between students' life satisfaction and possible predictors we hypothesized would be salient given findings from the preceding literature review. The predictors included variables commonly regarded as within students (i.e., their unique strengths or weaknesses) or within environment (i.e., their feelings about, or relationships with, parents, school, and peers).

In particular, the internal or student-level factors examined in relation to students' life satisfaction include indicators of students' character strengths, academic achievement, extracurricular activity involvement, perfectionistic tendencies, and coping styles. Regarding character strengths, we examined grit, consistent with the important role of perseverance that emerged in prior studies of strengths in academically successful Finnish students (Salmela & Uusiautti, 2015). Given the relevance of achievement and accomplishment to well-being, we examined the grades students earned in their courses. Consistent with conceptualizations of perfectionism as multifaceted, we examined students' levels of adaptive (i.e., high standards for excellence) and maladaptive (i.e., discrepancy between performance and standards) aspects of perfectionism. Prior research on high school students in IB programs indicated that they experience greater stress than students in general education, and that use of coping strategies like positive reappraisal (i.e., focus your thoughts on the good things in your life or the good things in a difficult situation) is associated with higher life satisfaction even among the most stressed students (Suldo, Shaunessy, & Hardesty, 2008). Recent research has discerned that the primary stressors faced by high school students in accelerated courses entail intense academic demands (Suldo, Dedrick, Shaunessy-Dedrick, Fefer, & Ferron, 2015) and confirmed significant links between the strategies that students rely on to manage these academic stressors, and students' mental health and academic success (Suldo, Dedrick, Shaunessy-Dedrick, Roth, & Ferron, 2015). In the current project, we examined students' responses to academic stressors by asking them the frequency

with which they engaged in behaviors—specifically, cognitive reappraisal and attempts to handle problems alone—that co-occur with greater or reduced levels of life satisfaction, respectively.

The external or environmental-level factors examined in relation to students' life satisfaction included indicators of students' relationships with parents and classmates, as well as their engagement in their learning environment. In terms of parent-child relationships, we examined parents' emotional support and autonomy promotion, dimensions of authoritative parenting that predict greater life satisfaction among secondary students (Suldo & Huebner, 2004). Features of the academic environment that have been suggested as particularly salient to gifted students' psychological well-being include supportive relationships with classmates (Winner, 2000), flow experiences during learning (Hoekman et al., 1999; Shernoff et al., 2014), and satisfaction with schooling experiences (Ash & Huebner, 1998), which can be reflected in feelings of pride in one's school, satisfaction with one's academic program, and positive appraisals of one's teachers (Jin & Moon, 2006; Robertson, 2013).

Mental health of gifted students in accelerated high school programs. As described previously, modern conceptualizations of mental health consider subjective well-being in tandem with psychopathology. Accordingly, the participants in our study reported their life satisfaction via the Students' Life Satisfaction Scale (SLSS; Huebner, 1991), and their symptoms of psychopathology (i.e., anxiety, depression, social stress, attention problems, hyperactivity) via the Behavioral and Emotional Screening System (BESS; Kamphaus & Reynolds, 2007). Comparison of participants' BESS scores to the distribution of scores for a nationally representative sample of adolescents ($N = 1000$, ages 15–18) indicates that gifted students in accelerated high school classes are no more likely to have elevated levels of risk for having or developing emotional or behavioral problems. Specifically, in the BESS normative sample, between 13% and 14% of adolescents are classified as elevated risk (T score ≥ 61). In our sample, 14.5% of the gifted students ($n = 97$) yielded BESS scores within the elevated risk range. For nongifted peers

in AP classes or IB programs, 15.4% ($n = 263$) fell in the elevated risk range. Taken together, these findings support the notion that the proportion of high school students in accelerated curricula that may be considered at risk for mental health problems is on par with the rate of mental health problems seen in typical adolescents.

National norms have not been advanced for subjective well-being. Instead, life satisfaction scores can be interpreted in an ipsative manner, and/or mean levels of life satisfaction can be compared between groups. On the SLSS, scores range from 1 (*strongly disagree* that life is going well) to 6 (*strongly agree* with statements that indicate high life satisfaction); scores ≥ 4.0 are in the positive range. On the SLSS, the average level of life satisfaction reported by our large sample of students in AP classes and IB programs was 4.26 ($SD = 0.96$), which exceeds the minimum value that corresponds to at least mild satisfaction with life. Further, there was not a significant difference in the happiness level of the gifted and nongifted groups, ($t(2374) = -1.58, p = .11$). Instead, the positive mean level of life satisfaction reported by the gifted group ($M = 4.31, SD = 0.94$) was comparable to the life satisfaction level reported by their high-achieving classmates ($M = 4.24, SD = 0.97$).

Predictors of life satisfaction among gifted students in accelerated high school programs. To understand individual differences in gifted students' subjective well-being, we examined the magnitude and statistical significance of bivariate relationships (correlations) between overall life satisfaction scores and the internal and environmental factors described previously as potentially salient to the happiness of gifted adolescents. Table 28.1 summarizes the way each factor was measured, as well as reports associations between a given factor and similar constructs represented in the dataset that we considered including in the present analyses, but ultimately chose to exclude because of conceptual overlap with the included factors.

Table 28.2 presents the correlations between all variables, as yielded within the dataset restricted to the 670 gifted high school students. As shown in Table 28.2, all variables selected for examination to better understand differences in gifted students'

TABLE 28.1

Indicators of Internal and Environmental Factors Examined in Relation to Life Satisfaction

Predictor variable	Measurement strategy	Strong associations with other variables in dataset
Academic achievement	Unweighted GPA during semester that participants completed surveys assessing variables	$r = .45$ with mean score on AP/IB exams $r = -.42$ with coping-reduce effort on schoolwork factor (CADS)
Authoritative parenting	Composite of the responsiveness and autonomy granting scales of the Parenting Style Inventory II (Darling & Toyokawa, 1997)	$r = .51$ with turn to family factor (CADS) $r = .39$ with home support for learning
Classmate support	Classmates scale of the Child and Adolescent Social Support Scale (Kerres Malecki & Demaray, 2002)	n/a
Flow in AP or IB classes	Short Dispositional Flow Scale—2 (Jackson, Martin, & Eklund, 2008)	$r = .58$ with academic self-concept scale (SAAS-R)
Positive attitudes toward school	Attitudes toward school scale of the SAAS-R (McCoach & Siegle, 2003)	$r = .56$ with Attitudes toward Teachers scale (SAAS-R) $r = .57$ with satisfaction with AP or IB
Coping—cognitive reappraisal	Cognitive appraisal factor of the CADS (Suldo, Dedrick, Shaunessy-Dedrick, Fefer, & Ferron, 2015)	$r = -.44$ with time and task management factor (CADS)
Coping—handle problems alone	Attempt to handle problems alone factor of the CADS	$r = -.33$ with turn to family factor (CADS)
Extracurricular activity involvement	Composite of hours per week (intensity) and number of types (breadth) of extracurricular activity involvement	$r = .44$ with athletic diversions factor (CADS)
Grit	Short Grit Scale (Duckworth & Quinn, 2009)	$r = .57$ with motivation and self-regulation scale (SAAS-R) $r = -.54$ with coping-reduce effort on schoolwork (CADS)
Perfectionism—maladaptive	Discrepancy scale of the APS-R (Slaney, Mobley, Trippi, Ashby, & Johnson, 1996)	$r = -.45$ with academic self-concept scale (SAAS-R)
Perfectionism—adaptive	High standards scale of the APS-R	$r = .60$ with goal valuation scale (SAAS-R) $r = .65$ with motivation and self-regulation scale (SAAS-R) $r = -.47$ with coping-reduce effort on schoolwork (CADS)

Note. AP = Advanced Placement; IB = International Baccalaureate; GPA = grade point average; SAAS-R = School Attitude Assessment Survey—Revised; CADS = Coping With Academic Demands Scale; APS-R = Almost Perfect Scale—Revised.

happiness were, as expected, significantly correlated ($p < .05$) with life satisfaction in the anticipated directions. Regarding the magnitude of the associations, the strongest correlate of gifted adolescents' life satisfaction was authoritative parenting ($r = .52$). High school students who perceived their parents provided emotional support, while also supporting their autonomy and freedom, reported the

highest happiness with their lives. Although participation in extracurricular activities and semester GPA yielded relatively small associations with life satisfaction ($r = .11$ and $.19$, respectively), these variables still demonstrated statistically significant and positive correlations, with slightly higher life satisfaction occurring with better grades and greater intensity/breadth of extracurricular activity

TABLE 28.2

Correlations Between Gifted Students' Global Life Satisfaction, Internal Features, and Environmental Experiences

	1	2	3	4	5	6	7	8	9	10	11
1. Life satisfaction	1.00										
2. Academic achievement	.19*	1.00									
3. Authoritative parenting	.52*	.18*	1.00								
4. Classmate support	.29*	.03	.20*	1.00							
5. Flow in AP/IB classes	.35*	.16*	.29*	.31*	1.00						
6. Positive attitudes toward school	.35*	.10*	.25*	.30*	.29*	1.00					
7. Coping—cognitive reappraisal	.30*	.12*	.32*	.23*	.42*	.21*	1.00				
8. Coping—handle problems alone	-.35*	-.16*	.28*	-.18*	-.04	-.15*	-.04	1.00			
9. Extracurricular activity involvement	.11*	.17*	.03	.11*	.15*	.08*	.15*	-.07	1.00		
10. Grit	.37*	.33*	.30*	.18*	.43*	.23*	.37*	-.20*	.17*	1.00	
11. Perfectionism—maladaptive	-.45*	-.22*	-.37*	-.21*	-.36*	-.20*	-.24*	.31*	.02	-.41*	1.00
12. Perfectionism—adaptive	.25*	.40*	.28*	.18*	.39*	.20	.35*	-.09*	.21*	.44*	-.08*

Note. $N = 670$; AP = Advanced Placement; IB = International Baccalaureate.

* $p < .05$.

involvement. The other internal and external factors yielded medium-sized correlations with life satisfaction, in support of the notion that happier gifted youth experience higher levels of grit ($r = .37$), flow in the classroom ($r = .35$), classmate support ($r = .29$), and positive affect toward their school ($r = .35$), as well as tend to cope with academic stressors through greater reliance on optimistic thinking strategies ($r = .30$), while eschewing the urge to handle problems alone ($r = -.35$). Finally, the association between perfectionism and life satisfaction covaried with the nature of the perfectionistic feature; holding high standards for performance was related to higher life satisfaction ($r = .25$), whereas diminished life satisfaction was more common to students who judged themselves as failing to meet their performance standards ($r = -.45$).

To determine the most salient and unique predictors of gifted high school students' life satisfaction, we included these predictors in a simultaneous multiple regression equation. The linear combination of internal and external factors explained 43.24% of the variance in global life satisfaction ($F(11, 655) = 45.35, p < .001$). A review of beta weights yielded from the equation indicated that six of the 11

internal and external factors were unique predictors of students' overall life satisfaction (see Table 28.3). Specifically, authoritative parenting ($\beta = .30$), positive attitudes toward school ($\beta = .15$), flow experiences in the AP/IB classroom ($\beta = .07$), classmate support ($\beta = .06$), negative coping (handle problems alone; $\beta = -.15$), and maladaptive perfectionism ($\beta = -.18$) independently contributed to differences in life satisfaction after controlling for the shared contribution of all variables hypothesized to matter. Uniqueness indices are also displayed in Table 28.3. After controlling for the relative contributions of all other variables, authoritative parenting was the strongest predictor, uniquely accounting for 7% of the variance in students' life satisfaction. Positive attitudes toward school, ineffective coping (e.g., handling problems alone), and maladaptive perfectionism each accounted for an additional 2% of the unique variance in students' life satisfaction.

SUMMARY AND CONCLUSIONS

A central aim of positive psychology is to foster strengths and growth among all individuals, rather than reserve psychological attention to those who

TABLE 28.3

Gifted Students' Global Life Satisfaction Predicted by Internal and Environmental Factors

Predictor	<i>b</i>	<i>SE b</i>	β	<i>t</i>	Uniqueness index
Academic achievement	.01	.05	.00	0.11	.00
Authoritative parenting	.38	.04	.30	8.70***	.07
Classmate support	.07	.03	.06	1.95†	.00
Flow in AP/IB classes	.12	.06	.07	1.98*	.00
Positive attitudes toward school	.09	.02	.15	4.53***	.02
Coping—cognitive reappraisal	.05	.04	.05	1.38	.00
Coping—handle problems alone	-.18	.04	-.15	-4.68***	.02
Extracurricular activity involvement	.05	.04	.04	1.28	.00
Grit	.09	.06	.06	1.53	.00
Perfectionism—maladaptive	-.13	.03	-.18	-4.98***	.02
Perfectionism—adaptive	.02	.04	.02	0.53	.00

Note. Uniqueness index = squared semipartial correlation, $N = 670$, $R^2 = .43$ ($F[11, 655] = 45.35$); AP = Advanced Placement; IB = International Baccalaureate.

† $p = .05$, * $p < .05$, *** $p < .0001$.

suffer the most. When it comes to the likelihood of requiring mental health services to treat the presence of problems, research does not support an elevated need among gifted populations. Rather, findings from the literature indicate that the number of gifted students with elevated risk for psychopathology is no greater than one would expect in a sample of typical children and adolescents. Further, extant research supports the notion that most gifted students could be described as happy, as indexed by positive appraisals of their overall lives and within specific domains (e.g., friends and school). When compared with other high-achieving students, findings support the notion that gifted students' life satisfaction is comparable with that of their peers in AP classes or IB programs who have not been previously identified as gifted. Taken together, gifted students appear just as likely to experience complete mental health as students who represent a broader range of intellectual abilities. This finding contrasts early misconceptions that gifted students may be at elevated risk for emotional distress, at least with respect to gifted youth whose accelerated curricula may provide an educational setting that is considered an appropriate developmental placement.

In addition to directing attention to positive indicators of well-being designed to capture the full range of human functioning (from miserable to delighted,

as opposed to stopping at “not symptomatic”), research from a positive psychology perspective has advanced our understanding of the individual traits and environmental contexts that are most likely to promote a flourishing state of well-being. Findings have illustrated that gifted students' happiness is not only tied to their school experiences, but also influenced by factors within families and the students' internal traits. Regarding schooling experiences, research has confirmed that gifted students with higher life satisfaction report (a) more frequent flow experiences in their AP classes or IB programs, (b) greater support from their classmates in AP classes or IB programs, and (c) more positive attitudes toward their school, which co-occurs with greater satisfaction with the specific academic program and the teachers within that program. These findings illustrate that creating an appropriately challenging, yet emotionally supportive, academic setting for gifted adolescents is instrumental to ensuring not only academic success but also students' happiness.

Parents often inquire as to their role in supporting their children's emotional and academic development. During the teenage years, when adolescents spend more time outside of the home in understandable pursuit of educational, social, and vocational endeavors, parents may be particularly unsure of

their potential influence. In no uncertain terms, our recent findings underscore that gifted adolescents' life satisfaction is tied most closely to their perception of their parents as (a) warm, responsive, and emotionally supportive; and (b) promoting their autonomy. This authoritative style of parenting is generally regarded as predictive of optimal outcomes in youth (Steinberg, 2001), and gifted students in accelerated high school programs are no exception.

Finally, our research as well as that of others supports the need to develop a better understanding of how to identify and promote the student-level character strengths and skills that are tied to youth happiness, and emphasizes some student traits that place gifted students at risk for diminished happiness. Whereas higher levels of grit and use of effective coping strategies (e.g., responding to an academic stressor with optimistic thoughts or positive self-talk) were correlated with higher life satisfaction, some of the strongest predictors of low life satisfaction were maladaptive perfectionism and reliance on ineffective coping strategies (e.g., trying to handle problems alone, keeping problems to oneself). Therefore, educators may consider proactive strategies for identifying and intervening with students who demonstrate such tendencies. The potential outcome of such efforts—happier students—is likely to be uplifting for children, adolescents, and adults alike.

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