



SENG Journal: Exploring the Psychology of Giftedness

Volume 1 | Issue 1

March 2022

Volume 1 Issue 1 (Full Issue)

Follow this and additional works at: <https://scholarworks.wm.edu/sengj>



Part of the [Educational Psychology Commons](#), and the [Gifted Education Commons](#)

Recommended Citation

(2022). Volume 1 Issue 1 (Full Issue). *SENG Journal: Exploring the Psychology of Giftedness*, 1(1).
<https://doi.org/https://doi.org/10.25774/676j-5h86>

This Full Issue is brought to you for free and open access by the Journals at W&M ScholarWorks. It has been accepted for inclusion in SENG Journal: Exploring the Psychology of Giftedness by an authorized editor of W&M ScholarWorks. For more information, please contact scholarworks@wm.edu.

SENG Journal

Exploring the Psychology of Giftedness



SENGJ

Volume 1

Issue 1

March 2022

Editors: Tracy L. Cross

Jennifer Riedl Cross

SENG

President

Alonzo Kelly

Vice President

Caroline Lubbe

Treasurer

Carrie Pokrefke

Secretary

Karen Arnstein

Immediate Past President

Kristina Collins

Director of Programming

Michael Postma

Directors at Large

Adam Laningham

Vanessa Darko

Mark Hess

Sylvia Bagley

Lin Lim-Goh

Joslyn Johnson

International Liaison

Gayle Brady

SENG Journal Staff

Editors

Tracy L. Cross, *William & Mary*

Jennifer Riedl Cross, *William & Mary*

Production Editor

Keenan P. Cross

Editorial Assistants

Anyesha Mishra, *William & Mary*

Meveryn Chua, *William & Mary*

Advisory Board

Edward R. Amend, *The Amend Group*

Chandra B. Floyd, *Kennesaw State University*

Andrea D. Frazier, *Columbus State University*

Nancy B. Hertzog, *University of Washington*

Mihyeon Kim, *William & Mary*

Christopher Lawrence, *Northern Kentucky University*

Sakhavat Mammadov, *Valdosta State University*

Kristie L. Speirs Neumeister, *Ball State University*

Colm O'Reilly, *Dublin City University*

Susannah M. Wood, *University of Iowa*

William & Mary Libraries

Dean

Carrie L. Cooper

Head of Digital Services

Deborah A. Cornell

Publishing and Open Access Librarian

Rosalyn Liljenquist

About This Journal

SENG Journal: Exploring the Psychology of Giftedness (SENGJ) publishes original research on the psychology of giftedness biannually, in March and September. Rigorous quantitative and qualitative methodologies used in studies of the cognitive, social, and emotional realms will enlighten readers about the inner world of a unique population and contribute to our understanding of the development of talent. The journal also publishes reviews of research, theoretical explorations and interviews with thought leaders and experts on the psychology of gifted individuals. Articles have applicability for families, educators, counselors, psychologists, and all those with an interest in giftedness.

Submitting to SENJ

For more information on submitting to this journal, please visit <https://scholarworks.wm.edu/sengj>

ISSN 2831-5693

Copyright © 2022 Serving the Emotional Needs of the Gifted

	From the Editors	3
	About the <i>SENG Journal</i>	6
	Article	
An Analysis of Most Important Values Among Low-Income, High-Ability Middle School Students		7
	<i>Jennifer Riedl Cross</i>	
	Article	
Social Stress in Honors College Students: How Personality Traits, Perfectionism, Creativity, and Gender Predict Use of Social Coping Strategies		20
	<i>Angie L. Miller</i>	
	Article	
Individual Difference Predictors of Creative Ideation		37
	<i>Sakbavat Mammadov</i>	
	Interview	
Charmaine L. Shutiva		45
	Interview	
Edward R. Amend		51



From the Editors

Tracy L. Cross, Ph.D. 
Jennifer Riedl Cross, Ph.D. 

Welcome to the *SENG Journal*. We are pleased to share this first issue of a new journal that extends the field of gifted education. It is exciting to work with the SENG organization and William & Mary Libraries to produce a journal that not only fills a niche, but also, we hope, will promote more scholarship on the psychology of giftedness. The field of gifted education has produced a number of high-quality journals, but the field of psychology has not fully embraced the domain of giftedness. While research on the psychology of gifted individuals may appear in gifted education journals and in psychology journals, it is not the objective of those journals to address the psychology of giftedness. In creating the *SENG Journal* (*SENGJ*), we want to draw attention to the significance of psychology in a unique population. Over the past 40 years, we have sought as editors to inspire and encourage authors to explore new conceptions and take new directions in the field. *SENGJ* allows us to focus more intently on the psychology of giftedness, not narrowing our conceptions as we do so, but expanding on them as we ask our readers to think more broadly about giftedness – what it is, who we are talking about, and how to help them as they make the most of their potential.

The scope of *SENGJ* is broad, encompassing varied definitions of giftedness and areas of psychology. It is a peer-reviewed journal that publishes biannually, in March and September, with empirical articles, reviews of research, theoretical explorations, and interviews with thought leaders and experts about the psychology of giftedness. The tagline of the journal, "Exploring the Psychology of Giftedness," was chosen very purposefully. Psychology is an enormous discipline. To give you an idea of the breadth of this field, the American Psychological Association has 54 divisions. In every one of them, there is the possibility of researching exceptionally able individuals in myriad ways. Our professional friends who are service providers in the clinical or counseling arena emphasize the endogenous characteristics of gifted individuals, addressing the unique issues and struggles that are impacted by their abilities and sensibilities. While this focus is incredibly important, an emphasis on this as the sole conception of the psychology of giftedness creates limitations on our understanding and, for some, contributes to the image of gifted individuals as a population in need of extra mental health support. The woes of gifted individuals are easily dismissed by those who make the naïve assumption that giftedness is an advantage and a less privileged group is more deserving of our attention. Research can be cited to support both sides of the argument: some gifted individuals are psychologically healthy, even robust (Martin et al., 2010; Simonton, 2014; Terman, 1925) and some suffer from mental illness and psychological challenges (Berndt et al., 1982; J. Cross & Cross, 2015; Missett, 2013). Certainly, from our research on suicide among gifted individuals, we know that some suffer great psychological distress (T. Cross & Cross, 2018; T. Cross et al., 2002; T. Cross et al., 2006; T. Cross et al., 2020). We want *SENGJ* to be an outlet for research on this aspect of the psychology of gifted individuals, but there is so much more that fits under this umbrella.

Intelligence research has a natural place in the psychology of giftedness. Intelligence testing has long been how we identified who is in our population of

interest (e.g., Bracken, 2021). An IQ score has become a historical proxy for giftedness, but it is far too narrow a construct to encompass the fullness of the concept (Wai & Worrell, 2021). An allegiance to IQ as the definition of giftedness has limited our understanding (T. Cross & Cross, 2020) and stunted the growth of our field. It has unnecessarily painted us into a conceptual corner. As we have inched past this powerful conception, it has become clear that we need a more appropriate, multidimensional view of the psychology of giftedness and a more effective means of applying what we learn (T. Cross & Coleman, 2005; T. Cross & Cross, 2021). To date, few researchers have specialized in the relationship of achievement or performance (outcomes) and psychological development as the foundation (input). Subotnik and colleagues (2011, 2019; Olszewski-Kubilius et al., 2015, 2016; Worrell et al., 2021) have been the leaders in this movement within gifted education, fostering the shift to a talent development model. The talent development framework provides the impetus for the field to more fully realize new areas of the psychology of giftedness that can be pursued or illustrated. We want *SENGJ* to be a welcoming outlet for this kind of research.

Social psychology has a place in *SENGJ*, as well. The impediments to success experienced by those with exceptional potential have both endogenous and exogenous foundations. Our relationships with others play an important role in the development of talent (Coleman & Cross, 1988; J. Cross et al., 2018; J. Cross et al., 2019; T. Cross et al., 1991). Understanding the impact of environment, including the psychology of others as it relates to giftedness, is critical.

One of the most exciting features of *SENGJ* is its status as an open access journal. The paywalls of the publishing world have been closing in on researchers. As publishers have monetized the work of authors, libraries have seen increasing costs to access information. Researchers who are not affiliated with an institution that has the funds for such access may be left with an incomplete understanding of their interest area. The gifted student with a burning desire to learn more about an academic topic will almost certainly hit a paywall that restricts their ability to learn. Jack Andraka, a high school student who invented an affordable, reliable test for pancreatic cancer at age 15 (Tucker, 2012), described in detail the barriers to his research in a TedX talk (Andraka, 2013). Our institution, William & Mary (W&M), is committed to making research accessible, affordable, and sustainable. Through its Collections and Research Initiative, W&M Libraries partners with an open access platform, bepress Digital Commons, to support Scholarworks, which will provide a home for *SENGJ*. The journal will be freely available to readers around the world and to authors, as well, as there are no fees required to publish their work. We are thankful for W&M's support as we lead the way in open access publishing in our field.

We also are pleased to have an array of researchers with an interest in the psychology of giftedness on our *SENGJ* Advisory Board. These professionals have already given their time and expertise to the development of this first issue of the journal. We look forward to working with them as we pursue this important enterprise. We also want to thank our peer reviewers for their contributions to the quality of articles in *SENGJ*. Their commitment to the peer review process is what will ensure we are producing a journal of the highest caliber.

Finally, we have the SENG organization to thank for making the creation of *SENGJ* possible. Founded by James T. Webb in 1981, SENG has built a community of support for gifted individuals and those who care for them. Through programs, training, and a library of resources, SENG offers information to foster positive development. We are pleased to be a part of this organization, which underwrites the cost of *SENGJ*'s production.

We look forward to your involvement with *SENGJ*. We hope you will consider submitting your research to the journal. If you are interested in serving as a peer reviewer, please contact us with information about your expertise.

References

- Andraka, J. T. (2013). Paywalls versus open access: Jack Andraka at TEDxUNPlaza [video]. YouTube. <https://youtu.be/ZKLi2f143w0>
- Berndt, D. J., Kaiser, C. P., & van Aalst, F. (1982). Depression and self-actualization in gifted adolescents. *Journal of Clinical Psychology*, 38(1), 142-150. [https://doi.org/10.1002/1097-4679\(198201\)38:1<142::AID-JCLP2270380123>3.0.CO;2-D](https://doi.org/10.1002/1097-4679(198201)38:1<142::AID-JCLP2270380123>3.0.CO;2-D)
- Bracken, B. A. (2021). The use of intelligence tests in the identification of gifted children. In T. L. Cross & J. R. Cross (Eds.) *Handbook for Counselors Serving Students with Gifts and Talents*, 2nd ed. (pp. 85-102). Prufrock Academic Press. <https://doi.org/10.4324/9781003235415-7>
- Coleman, L. J., & Cross, T. L. (1988). Is being gifted a social handicap? *Journal for the Education of the Gifted*, 11, 41-56. <https://doi.org/10.1177/016235328801100406>
- Cross, J. R., & Cross, T. L. (2015). Clinical and mental health issues in counseling the gifted individual. *Journal of Counseling & Development*, 93, 163-172. <https://doi.org/10.1002/j.1556-6676.2015.00192.x>
- Cross, J. R., Frazier, A. D., Kim, M., & Cross, T. L. (2018). A comparison of perceptions of barriers to academic success among high-ability students from high- and low-income groups: Exposing poverty of a different kind. *Gifted Child Quarterly*, 62, 111-129. <https://doi.org/10.1177/0016986217738050>
- Cross, J. R., Vaughn, C. T., Mammadov, S., Cross, T. L., Kim, M., O'Reilly, C., Spielhagen, F., Pereira Da Costa, M., & Hymer, B. (2019). A cross-cultural study of the social experience of giftedness. *Roeper Review*, 41, 224-242. <https://doi.org/10.1080/02783193.2019.1661052>
- Cross, T. L., Cassady, J. C., & Miller, K. A. (2006). Suicide ideation and personality characteristics among gifted adolescents. *Gifted Child Quarterly*, 50, 295-358. <https://doi.org/10.1177/001698620605000403>
- Cross, T. L., & Coleman, L. J. (2005). School-based conception of giftedness. In R. J. Sternberg & J. E. Davidson (Eds.), *Conceptions of giftedness* (2nd ed., pp. 52-63). Cambridge University Press. <https://doi.org/10.1017/CBO9780511610455.005>
- Cross, T. L., Coleman, L. J., & Terhaar-Yonkers, M. (1991). The social cognition of gifted adolescents in schools: Managing the stigma of giftedness. *Journal for the Education of the Gifted*, 15, 44-55. <https://doi.org/10.1177/016235329101500106>
- Cross, T. L., & Cross, J. R. (2017). Challenging an idea whose time has gone. *Roeper Review*, 39, 191-194. <https://doi.org/10.1080/02783193.2017.1319000>
- Cross, T. L. & Cross, J. R. (2018). *Suicide among gifted children and adolescents: Understanding the suicidal mind* (2nd ed.). Prufrock Academic Press.
- Cross, T. L., Cross, J. R. (2021). A school-based conception of giftedness: Clarifying roles and responsibilities in the development of talent in our public schools. In R. J. Sternberg & D. Ambrose (Ed.), *Conceptions of Giftedness and Talent*. Palgrave MacMillan https://doi.org/10.1007/978-3-030-56869-6_6
- Cross, T. L., & Cross, J. R., Dudnytska, N., Kim, M., & Vaughn, C. T. (2020). A psychological autopsy of an intellectually gifted student with Attention Deficit Disorder. *Roeper Review*, 42(1), 6-24 <https://doi.org/10.1080/02783193.2019.1690081>
- Cross, T. L., Gust-Brey, K., & Ball, P. B. (2002). A psychological autopsy of the suicide of an academically gifted student: Researchers' and parents' perspectives. *Gifted Child Quarterly*, 46, 247-264. <https://doi.org/10.1177/001698620204600402>
- Martin, L. T., Burns, R. M., & Schonlau, M. (2010). Mental disorders among gifted and nongifted youth: A selected review of the epidemiologic literature. *Gifted Child Quarterly*, 54, 31-41. <https://doi.org/10.1177/0016986209352684>
- Missett, T. (2013). Exploring the relationship between mood disorders and gifted individuals. *Roeper Review*, 35(1), 47-57. <https://doi.org/10.1080/02783193.2013.740602>
- Olszewski-Kubilius, P., Subotnik, R. F., & Worrell, F. C. (2015). Antecedent and concurrent psychosocial skills that support high levels of achievement within talent domains. *High Ability Studies*, 26(2), 195-210. <https://doi.org/10.1080/13598139.2015.1095077>
- Olszewski-Kubilius, P., Subotnik, R. F., & Worrell, F. C. (2016). The role of domains in the conceptualization of talent. In D. Ambrose & R. J. Sternberg (Eds.), *Giftedness and talent in the 21st century* (pp. 81-99). Sense. https://doi.org/10.1007/978-94-6300-503-6_5
- Simonton, D. K. (Ed.). (2014). *The Wiley handbook of genius*. John Wiley & Sons. <https://doi.org/10.1002/9781118367377>
- Subotnik, R. F., Olszewski-Kubilius, P., & Worrell, F. C. (2011). Rethinking giftedness and gifted education: A proposed direction forward based on psychological science. *Psychological Science in the Public Interest*, 12, 3-54. <https://doi.org/10.1177/1529100611418056>
- Subotnik, R. F., Olszewski-Kubilius, P., & Worrell, F. C. (Eds.). (2019). *The psychology of high performance: Developing human potential into domain-specific talent*. Washington, DC: American Psychological Association. <https://doi.org/10.1037/0000120-000>
- Terman, L. M. (1925). *Genetic studies of genius: Vol. 1. Mental and physical traits of a thousand gifted children*. Stanford University Press.
- Tucker, A. (2012, December). Jack Andraka, the teen prodigy of pancreatic cancer. *Smithsonian Magazine*. <https://www.smithsonianmag.com/science-nature/jack-andraka-the-teen-prodigy-of-pancreatic-cancer-135925809/>
- Wai, J., & Worrell, F. C. (2021). The future of intelligence research and gifted education. *Intelligence*, 87, N.PAG. <https://doi.org/10.1016/j.intell.2021.101546>
- Worrell, F. C., Olszewski-Kubilius, P., & Subotnik, R. F. (2021). Serving gifted students: A talent development perspective. In T. L. Cross & J. R. Cross (Eds.) *Handbook for Counselors Serving Students with Gifts and Talents*, 2nd ed. (pp. 29-44). Prufrock Academic Press. <https://doi.org/10.4324/9781003235415-4>



About the *SENG Journal*

The History of *SENGJ*

The origins of the *SENG Journal* were in 2017. Drs. Kristina Collins and Michael Postma brought this idea to the attention of the board as another means of communicating the mission and message of SENG to a newer audience. At the time, SENG was not regarded in professional circles as a research-based entity, but a resource-based organization that focused on the broader needs of the gifted/talented population. The organization had been subjected to some criticism for not being 'scholarly' enough. In response to these questions, the idea of a solid, empirical journal was brought to discussion. At that time, SENG did not have the resources to accomplish this feat, but the idea remained. In early 2020, SENG renewed its push to begin a new publication. The organization reached out to Dr. Tracy Cross, given his vast experience and reputation as both a professional and long-time editor. Now, in 2022, the *SENG Journal* is ready with its first publication. Thanks to everyone whose hard work and dedication have made this happen.

-Michael Postma, SENG Director of Programming

About This Issue

In this first issue of *SENGJ*, we have three research articles and two interviews. The first article, by Jennifer Riedl Cross, "An Analysis of Most Important Values Among Low-Income, High-Ability Middle School Students," describes research on the value orientations of students in an understudied population. Values are an important motivator of behavior, but frequently take a back seat to psychological needs, expectancies, or valuations. This article is the first exploration of Schwartz's theory of basic values in a gifted population. Two articles in this issue examine an older sample of gifted students, honors college undergraduates. Angela Miller's article, "Social Stress in Honors College Students: How Personality Traits, Perfectionism, Creativity, and Gender Predict Use of Social Coping Strategies" explores endogenous personality characteristics and how they are associated with self-reported behaviors for coping with giftedness in social situations. By extending the research on social coping among adolescents to a college population, we learn more about developmental differences in these behaviors. Sakhavat Mammadov, in his article, "Individual Difference Predictors of Creative Ideation," identifies the influence of personality and subjective well-being on thoughts about creative production (creative ideation). Confirming findings of openness and extraversion as contributors to creative ideation, this study clarifies the importance of well-being in early stages of the creative process.

The interviews in this issue describe the experiences of two outstanding exemplars with long careers working with gifted individuals. Dr. Charmaine Shutiva had a non-traditional career path in her nearly four decades of developing gifted education for Native Americans in the Southwest. Dr. Edward Amend, a practicing clinical psychologist, has served gifted individuals for more than 25 years and was a protégé of James Webb, founder of SENG. His career took a fairly traditional path, but with a nontraditional clientele of gifted individuals, opening the door for more effective practice among those who became familiar with his work. The values of her students and community figure prominently in her advice to readers. Both of these career-committed professionals have touched the lives of numerous gifted individuals through their desire to serve them using their unique skillsets and in very different settings. They should be commended for their dedication to assisting in the positive development of high ability students.



Article

An Analysis of Most Important Values Among Low-Income, High-Ability Middle School Students

Jennifer Riedl Cross, Ph.D. 

Abstract

Value orientations based on Schwartz's theory of human values were collected from low-income, high-ability middle school students ($N = 215$; 87.4% Black, Hispanic, or Mixed) through a values affirmation activity in the 7th and again in the 8th grade. Students ranked "Being successful" highest in 7th grade, "Being safe and secure" highest in 8th grade. Most important values in the Conservation and Self-Transcendent quadrants predominated and were most stable from 7th to 8th grade. Analysis of essays on their most important values identified the significance of Others in their lives, including the desire to be successful for others. Reflecting on their values led them to be Future Oriented in their thinking about the values that should guide them. Fear/Death-Awareness was another significant theme, as students described their desire to be free from danger and to live a good life, short as it may be. As educators build supportive environments in schools for economically disadvantaged students, they can benefit from considering the importance of students' values, which will be motivating factors in their engagement.

Keywords: *values • low-income • underrepresented • moral development • mortality salience • motivation • beliefs • middle school • disadvantaged*

In a study of more than 300 supporters of gifted education—researchers, teachers, administrators, and parents—there was nearly 100% agreement that the primary purpose of gifted education is "to help students with gifts and talents achieve their maximum potential" (Cross et al., 2010, p. 241). Exactly what is meant by "potential," however, is a value-laden question. Is the wealthiest person the one who has achieved maximum potential? Or the kindest, most generous person? Is the person who cunningly avoids barriers to their own prosperity (e.g., paying taxes, following rules, etc.) maximizing their potential? Is the mountain-climber or extreme athlete who spends a lifetime attempting to achieve a personal goal maximizing their potential? These are examples of individuals on different ends of motivational continua, which Schwartz (1992) describes as part of a circumplex of values. Individuals are motivated by the importance they place on four opposing value orientations: self-enhancement/self-transcendence and conservation/openness to change (Schwartz, 1992). Which of these orientations underpins our notion of maximized potential will determine how the task is approached.

Value orientations have been largely neglected in research on students with gifts and talents (SWGT), as researchers have focused on more narrow motivational constructs, such as attribution (e.g., Snyder et al., 2013), achievement goals (e.g., Fletcher & Speirs Neumeister, 2012), or personality (e.g., Mammadov et al., 2018), for example. The long history of values research (e.g., Allport et al., 1960; Rokeach, 1973; Schwartz, 1992; Schwartz et al., 2012) provides a broader framework within which

to consider the motivations of SWGT, opening the door to new directions for the support of their psychosocial development. As significant motivators of behavior, it is important to understand the value orientations of high-ability students. This may have particular significance among underrepresented populations, whose value orientations may be questioned by educators and decisionmakers. For example, educators may create punitive policies based on their assumption that parents of students from low-income backgrounds do not value academic achievement, when this is not at all the case. Misperceptions of others' values are frequent (Hanel et al., 2018) and may be the source of discord or ineffective policy implementation. The present study is the first of its kind to explore the values of low-income, high-ability middle school students, who may benefit most from our greater understanding of their value orientations.

Values in Psychological Research

Values are "cognitive representations of basic motivations" (Sagiv & Roccas, 2017, p. 3). They are abstract ideas of what is desirable and important to an individual, and are relatively stable, once established, although they can change in response to cultural shifts, such as immigration (Bardi & Goodwin, 2011), or major events, such as the September 11, 2001 terrorist attacks on the World Trade Center towers (Murphy et al., 2004). Changes in value hierarchies occur with development, as well (e.g., Cieciuch et al., 2016; Vecchione et al., 2020). One's values are not specific to one situation or another, but guide behavior and evaluations across situations (Schwartz, 1992). Values are guiding principles that underpin our judgments and justifications for behaviors. These characteristics distinguish values from attitudes, traits, or interests, all of which may be affected by values.

People assign varied importance to their values and those deemed more important will be most likely to determine behaviors (Sagiv & Roccas, 2017).

Hitlin (2003) proposed that values are at the core of one's personal identity, determining what behaviors, including those necessary to attain possible selves (Markus & Nurius, 1986; Oyserman, et al., 2006), are desirable and, therefore, "'feel' right" (Hitlin, 2003, p. 124). Schwartz (1992; Schwartz et al., 2012) proposed that values exist in an integrated system of motivations, represented by a circumplex of interrelated value types. The 10 values in Schwartz's (1992) circumplex—self-direction, stimulation, hedonism, achievement, power, security, conformity, tradition, benevolence, and universalism—represent conflicting desires for openness to change or conservation and for self-transcendence or self-enhancement. When self-enhancement (e.g., being ambitious, influential, capable, etc.) is the most desirable goal, there will be at least some degree of conflict with values of self-transcendence (e.g., equality, social justice, benevolence). After two decades of research based on the circumplex model, Schwartz and colleagues (2012) included enhancements to the model. They identified the openness to change and self-enhancement dimensions as having a personal focus, whereas the conservation and self-transcendence dimensions represent a social focus. Conservation and self-enhancement values would be most likely to take precedence when a person faces threats to security or self-preservation. Holding self-protection and anxiety-avoidance values would be adaptive in the face of such threats. In the absence of those threats, one may be better able to focus on the growth and anxiety-free values of self-transcendence and openness to change.

The development of values among children is a relatively new area of research. There is some evidence that children develop values through socialization processes (Döring et al., 2017), while other research has identified genetic factors, particularly for self-transcendence, self-enhancement, and conservation values (Uzefosky et al., 2016). In a longitudinal study of values among children ages 7 to 11, Cieciuch et al. (2016) found consistency in the structure of their values along the Schwartz (1992; Schwartz et al., 2012) circular model, but changes in the priority of values occurred as they matured. As they approached adolescence, the children became less focused on security and conformity (conservation values) and more open to change. The hierarchy of self-transcendence and self-enhancement values fluctuated in this period, increasing and decreasing, presumably as the children developed an increasing awareness of their relationship to others and a stronger personal identity (Hitlin, 2003). Vecchione et al. (2020) found increases in openness to change and self-enhancement value priorities among Italian early adolescents (ages 10-12), but conservation and self-transcendent values remained stable over the two years of the study. The exception

to this latter trend was in a decline in the importance of tradition. In contrast to these adolescent changes in value hierarchies, adults tend to become more oriented toward conservation and self-transcendence with age (Schuster et al., 2019).

Numerous studies have found females more highly value self-transcendence than males, whereas males place a higher value on power, achievement, and stimulation, although there are cultural differences (Schwartz & Rubel-Lifschitz, 2009). Age-related patterns of change in the importance of different values were similar for both boys and girls in Cieciuch et al.'s (2016) study.

Values are motivating beliefs and, as such, affect behavior. Voting preferences were structured around value orientations (Barnea & Schwartz, 1998) and attitudes toward war and support for right-wing authoritarianism and social inequality could be predicted by basic values (Cohrs et al., 2005). Despite being stable beliefs (Schuster et al., 2019), values are cognitions, meaning that they can be changed. Confronting people with challenges to the consistency of their preferred values and that of peers can effectively provoke changes (Rokeach & Cochrane, 1972). Maio et al. (2009) were able to induce changes in value orientations through priming for specific values. After completing word tasks that primed self-direction or security in one experiment and achievement and benevolence in another, subjects behaved in ways that were measurably different based on the primed value (i.e., more volunteering after being primed for benevolence, greater success in a word search task after being primed for achievement). In some studies, value change lasted for up to four weeks (Arieli et al., 2014). These studies have important implications for educators whose objective is to encourage learning or achievement values.

Value Affirmation Interventions

Values are a part of one's identity. Their desirability implies an "ought" guide (Maio et al., 2009) for the ideal self. Reflecting on what value one holds as "most important" clarifies for that person the dimension of behaviors that holds the strongest motivational attraction. We believe our values are desirable, therefore the values we hold are a positive aspect to our identity. As such, they can provide an important buffer when a threat to the self is encountered. Instead of responding defensively or attempting to dismiss the threat, a reminder of that deeply held conviction of what is "right," becomes a mechanism to restore a sense of self-integrity (Sherman & Cohen, 2006; Steele, 1988). A substantial research base has found positive effects of affirming one's values (see McQueen & Klein, 2006 and Yeager & Walton, 2011 for reviews). For example, smokers who wrote about their most important value were more likely to accept health information than smokers who wrote about their least important value (Crocker et al., 2008). Overweight women who wrote

Table 1: Sample Demographics

Ethnicity	7 th Grade			8 th Grade		
	Female <i>n</i> (%)	Male <i>n</i> (%)	7 th Total <i>n</i> (%)	Female <i>n</i> (%)	Male <i>n</i> (%)	8 th Total <i>n</i> (%)
Hispanic	32 (26.4)	2 (2.2)	34 (15.9)	22 (24.7)	1 (2.0)	23 (16.5)
Black	63 (52.1)	69 (74.2)	132 (61.7)	46 (51.7)	39 (78.0)	85 (61.2)
Mixed	11 (9.1)	10 (10.8)	21 (9.8)	8 (9.0)	6 (12.0)	14 (10.1)
White	11 (9.1)	4 (4.3)	15 (7.0)	9 (10.1)	2 (4.0)	11 (7.9)
Other	2 (1.7)	2 (2.2)	4 (1.9)	2 (2.2)	1 (2.0)	3 (2.2)
Missing	2 (1.7)	6 (6.5)	8 (3.7)	2 (2.2)	1 (2.0)	3 (2.2)
Total	121 (100.0)	93 (100.0)	214 (100.0)	89 (100.0)	50 (100.0)	139 (100.0)

about their most important value lost more weight and kept it off longer than overweight women who wrote about another person’s most important value (Logel et al., 2019). Women in a college physics course who wrote about their most important value had higher grades than non-affirmed women in the same classes (Miyake et al., 2010). The intervention resulted in a significant reduction in the gender performance gap.

Most significant for the present study is research with middle school students, particularly minority students, who saw long-term benefits from values affirmation interventions. African American middle school students who affirmed their most important value upon entering the 7th grade had higher GPAs in core classes through their 8th grade year and fewer African American students were identified as at-risk or placed into remediation during the study (Cohen et al., 2009). European American students did not benefit from the intervention, presumably because they are not as threatened by the “chronic evaluation” (p. 400) of the school environment. A sense of belonging in the school environment was higher among African American middle school students who affirmed their most important value in the first days of the school year than among those who had the same intervention four weeks later (Cook et al., 2012). Effects were most beneficial to low-performing African American students.

The Present Study

Based on this strong evidence, a values affirmation activity has been a staple of a personal development course in a summer academic STEM camp for low-income, high ability middle school students. The purpose of the personal development course is to help students develop an awareness of the requirements and challenges of achieving their academic and career goals, and to direct their personal agency toward meeting those goals by building on psychological concepts, such as goal setting, developing a growth mindset, and recognizing their internal and external resources. For some of these students, the camp was their first visit to a college campus. They would now be living in the dormitories and taking

high-level academic classes. The affirmation activity is an attempt to ameliorate negative effects of this potentially threatening environment.

One goal of the camp is to foster the development of a scholarly identity (Cross et al., 2016) in the hopes these students will be successful college students. The values affirmation activity is intended to boost students’ self-integrity as they meet the new challenges of the camp. It offers an additional opportunity to learn more about the belief systems of this unique population, which is the aim of the present study.

Method

Participants

Participants were rising 7th grade students (*N* = 215) from school districts with greater than 50% National School Lunch Program (NSLP) participants within a 75-mile radius of a mid-sized university in the Southeastern United States. A foundation-funded, two-week summer residential science, technology, engineering, and mathematics (STEM) camp provided free tuition to eligible students, those with family incomes of less than \$45,000 per year who were identified by their school district as having scored in the upper 10th percentile on a nationally normed aptitude, creativity, or achievement test. Students who did not meet the upper 10th percentile criteria, or for whom no test scores were available, were deemed eligible if teacher, gifted education coordinator, or caregiver recommendation and evidence of performance were provided. The majority of participants were female (56.3%) and African American (61.4%; see Table 1 for sample demographics). A subset of the sample returned in the subsequent summer as rising 8th graders (65%; *n* = 139).

Instrument

A 10-item online survey was adapted from the values proposed by Schwartz (1992; Bilsky & Schwartz, 1994), including language at a level appropriate for middle school students (ages 11-14). Table 2 includes the 10

Table 2. Value Mean Ranks

Value dimension	Value	7th Rank	7th Mean Rank	8th Rank	8th Mean Rank
Self-Enhancement	Being successful at what I do (ambitious, influential, capable, successful, self-respect)	1	3.81	2	4.04
Openness to Change	Making choices for myself (freedom, creativity, independent, choosing own goals, curious, self-respect)	2	4.22	3	4.32
Conservation	Being safe and secure (family security, national security, sense of belonging, knowing one's place, healthy, clean)	3	4.39	1	3.91
Self-Transcendence	Being kind (helpful, responsible, forgiving, honest, loyal, true friend)	4	4.68	4	4.76
Conservation	Doing what is expected of me (obedient, self-disciplined, being polite, honoring parents and older people)	5	5.36	6	5.09
Openness to Change/ Self-Enhancement	Having a good time (pleasure, enjoying life)	6	5.44	7	5.60
Self-Transcendence	A peaceful, just world (equality, a world of beauty, social justice, open-mindedness, protecting the environment)	7	5.71	5	5.03*
Openness to Change	Doing lots of different and exciting things (an exciting life, a varied life, daring)	8	6.39	9	6.88
Conservation	Respecting tradition (being religious, doing what I am supposed to because it's always been that way)	9	6.55	8	6.52
Self-Enhancement	Being popular and influential (social power, wealth, authority, making sure I don't look foolish)	10	8.43	10	8.85**

*Wilcoxon Signed Rank Test $p = .030$

**Wilcoxon Signed Rank Test $p = .015$

items. Students were instructed as follows:

To do the activity, you should rank-order the 10 statements, with your highest, most important value at the top (Number 1). This is the value you believe is the most important guiding principle in your life. The value that is least important to you will be at the bottom (Number 10). You can put the values in the order you want by selecting the item and dragging it up or down on the list.

After completing the ranking, students were shown a timer and asked to write for five minutes about why their most important value "is important and meaningful to you."

Procedure

As part of a personal development class designed to help students in planning for the future and build their personal agency, all students in the camp participated in a values affirmation activity in the first or second day of class. The teacher introduced the activity by emphasizing the personal nature of the values activity:

In this activity, you will be thinking about your personal beliefs. The purpose of the activity is for you to have a clear idea in your mind of your most important values. Values are the beliefs you have about what is important in life.

They guide you in making choices. People develop their values based on their life experiences and from what they are taught. Everyone believes that some values should be a guiding principle in her or his life and other values are not as important.

Students then completed the online survey. Previous administrations with this population indicated more than five minutes of writing was unsustainable, with students rapidly becoming bored or acting out. The same procedure was followed in both 7th and 8th grade years. Data was collected each summer from 2015 to 2020.

Analysis

The analysis addressed the numerical rank ordering for the full sample using a nonparametric mean rank calculation. Differences in the ranking of values between 7th and 8th grade were determined by a Wilcoxon Signed-Rank test. The frequencies of students' most important values were analyzed with the Pearson chi-square test. Content analysis of the students' written comments included open coding (Strauss, 1990) for each value, drawing codes directly from the students' words. A codebook describing the codes for each value was developed. Two coders had high percentage agreement on codes for each value, averaging

Table 3. Most Important Value Frequencies

Value Dimension	Value	7th Sex			8th Sex		
		Female n (%)	Male n (%)	7th Total n (%)	Female n (%)	Male n (%)	8th Total n (%)
Openness to Change	Making choices for myself	13 (10.7)	20 (21.5)	33 (15.4)	9 (10.1)	7 (14.0)	16 (11.5)
Openness to Change	Doing lots of different and exciting things	1 (0.8)	3 (3.2)	4 (1.9)	2 (2.2)	2 (4.0)	4 (2.9)
Openness to Change/ Self-Enhancement	Having a good time	13 (10.7)	11 (11.8)	24 (11.2)	8 (9.0)	6 (12.0)	14 (10.1)
Self-Enhancement	Being successful	18 (14.9)	16 (17.2)	34 (15.9)	13 (14.6)	10 (20.0)	23 (16.5)
Self-Enhancement	Being popular and influential	2 (1.7)	2 (2.2)	4 (1.9)	1 (1.1)	0 (0.0)	1 (0.7)
Conservation	Being safe and secure	22 (18.2)	13 (14.0)	35 (16.4)	20 (22.5)	10 (20.0)	30 (21.6)
Conservation	Doing what is expected of me	9 (7.4)	6 (6.5)	15 (7.0)	7 (7.9)	2 (4.0)	9 (6.5)
Conservation	Respecting tradition	8 (6.6)	6 (6.5)	14 (6.5)	5 (5.6)	3 (6.0)	8 (5.8)
Self-Transcendence	Being kind	16 (13.2)	7 (7.5)	23 (10.7)	6 (6.7)	1 (2.0)	7 (5.0)
Self-Transcendence	A peaceful, just world	19 (15.7)	9 (9.7)	28 (13.1)	18 (20.2)	9 (18.0)	27 (19.4)
Total		121 (100.0)	93 (100.0)	214 (100.0)	89 (100.0)	50 (100.0)	139 (100.0)

Note: No sex differences, 7th $\chi^2 (1, N = 214) = 9.56, p = .39$; 8th $\chi^2 (1, N = 139) = 4.52, p = .87$

well above 80% agreement. Cohen's kappa interrater reliability, a more robust analysis (McHugh, 2012), ranged from minimal ($\kappa < 0.4$) to strong ($\kappa > 0.80$) for the codes within each value. Raters evaluated all poorly rated codes and reached agreement on discrepancies, redefining any problematic codes and correcting misinterpretations. In a second round of axial coding, similarities in the codes led to the identification of patterns or themes in the data (Miles et al., 2014).

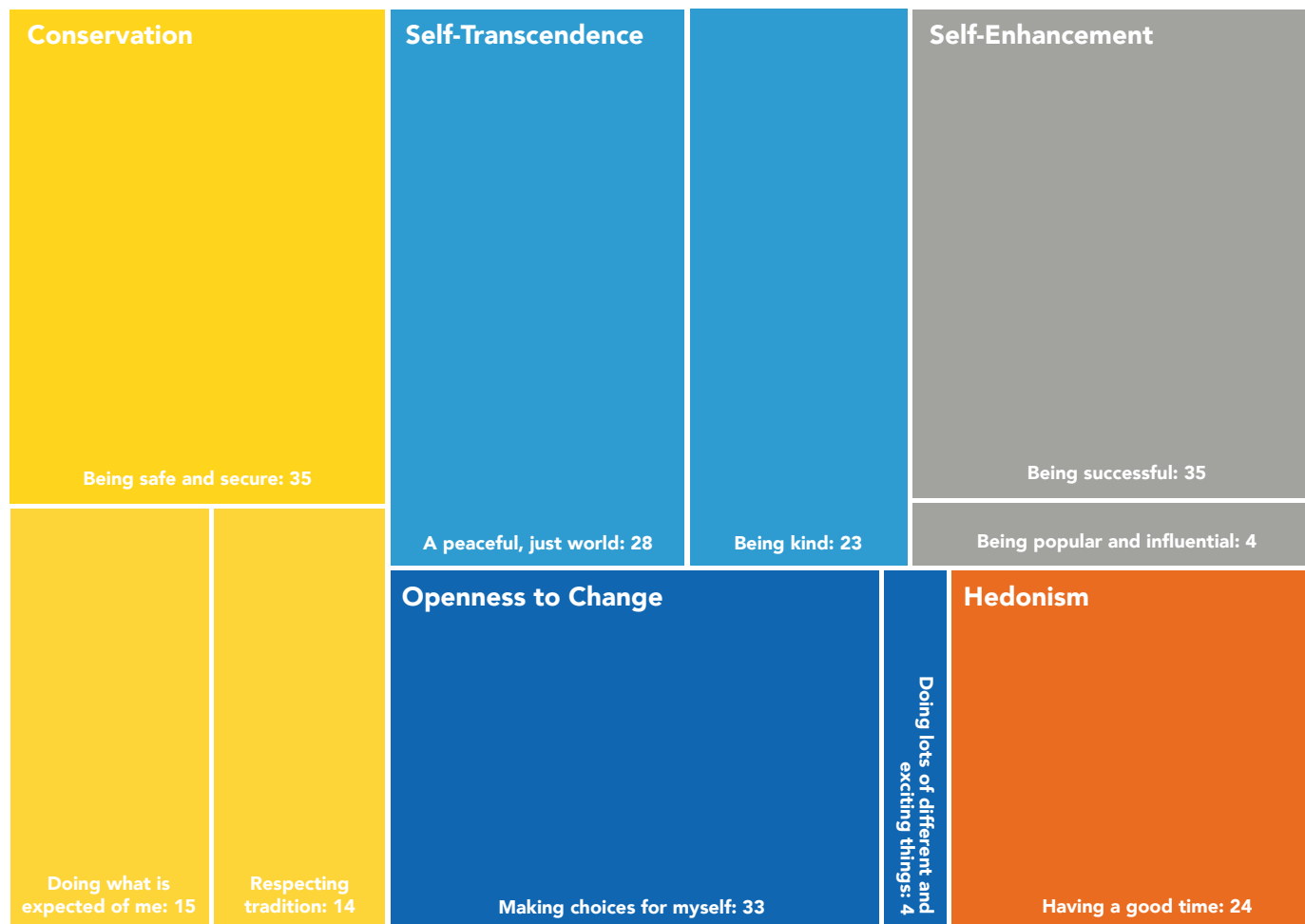
Results

An analysis of the mean ranks identified "Being successful" as the most important value in the full sample (see Table 2) and "Being popular and influential" as the least important. Among the 65% of students who participated in the 8th grade, the rankings differed, although statistically significant changes only occurred for "A peaceful, just world," which moved up in the rankings to a higher level of importance, and "Being popular and influential," which moved even farther down in students' rankings (see Table 2). The top-ranked value among 8th graders was "Being safe and secure," replacing "Being successful," the top-ranked 7th grade value. Aggregated mean ranks provide a picture of the full set of rankings. A focus on the value students chose as their most important, however, offers different insights, particularly when we examine students' explanations of why their most important value is meaningful to them.

The Conservation (CO) values of Security, Conformity, and Tradition were the most frequently chosen as most important (30%; See Table 3). Any apparent differences in frequencies of most important value by sex were no greater than chance, $\chi^2 (1, N = 214) = 9.56, p = .39$. Seventeen percent of students chose its opposing value dimension of Openness to Change (OC; Stimulation "Doing lots of different and exciting things," Self-Direction "Making choices for myself"). Hedonism ("Having a good time"), which falls between the dimensions of Openness and Self-Enhancement, was the top value of 11% of students. Self-Enhancement (SE) values ("Being popular," "Being successful") were selected as the most important value of 18% of students, in contrast with Self-Transcendence (ST; "Being kind," "A peaceful, just world") at 24%. Figure 1 portrays the proportion of responses in each dimension.

If we consider the opposing dimensions SE and ST, achievement ("Being successful") was chosen often as most important. The reasons tended to focus on a desire for a bright future. Only one student mentioned power over others as a benefit of being successful (FB15689)¹, and two students (MO16300, FB18297) commented on wanting to show other people they could do more than expected. Very few chose "Being popular" (power) and those who did offered reasons that were not about power or authority over others. Instead, they were about friendships or helping others through their influence and building confidence in themselves. To these students, achievement ("Being Successful") has positive outcomes for the self,

¹Identification codes for students indicate sex (M=Male, F=Female, ethnicity (B=Black, W=White, M=Mixed, O=Other, N=Missing, year in 7th grade, and a 3-digit random number. For example, FB16102 is a female, Black student in 7th grade in 2016.

Figure 1: Proportional Visualization of 7th Grade Students' Most Important Values by Dimension

in terms of self-esteem or sense of competence (e.g., accomplishment, self-sufficient) and in the possibility of a positive future. Family pride is important to some, and several see their success as a way of giving back to their communities or others (e.g., "I want to be successful in my life so I can improve my life and the lives of others because you can't help other people be successful if you aren't yourself" [MB19232]). Wealth and material possessions were only mentioned by two students (6% of those who chose being successful). Five (15%) indicated they want recognition for their success (e.g., "I really have a huge imagination, and I want to show it off!" [FB16464]).

Patterns

Three themes emerged from an analysis of students' comments: Others, Fear/Death Awareness, and Future Oriented. Exemplar statements from each theme are available in [Table S1 of the supplemental material](#). The theme of Others was predominant, especially in the Conservation values (Security, Conformity, and Tradition). These young adolescents were learning their place in society and were keenly aware of others' expectations.

Others are watching their choices, "I want to have a good reputation and to be known as a nice person." (FB18928); expecting them to be successful, "I would love to go to college and be successful there and out of college because that is something my family expects from me" (FB16712); taking pride in them, "I want to be successful because I want to be proud of what I do and what I spend my time on and I want to make my mom proud of me and prove that she raised me right" (MB19437); and expecting them to be kind, "I put being kind above everything because if you don't be kind you could be alone in this cruel world and because my mom always tells me to be kind and make new friends" (FB18676). The students understood that others rely on them to be safe,

"I live with my grandparents and I know that they need me to be there. And, I know that I need them a lot so if I wasn't safe and something would happen to me, there would be no one to take care of them so being safe is a big part of my life. Cause by me being safe it gives me a chance to keep someone else safe." (FB16612)

Students commented on how others have made sacrifices for them: "Your elders try everything they can

to make you happy. The least you can do for them is at least show them some respect and do what they say" (FH17817). They were aware of others' influence on them, "Because my dad told me that - to respect my religion" (FM15974), and their influence on others as a role model, "It is good to be good at what I do then you would know what you are doing. And you would not mess up and you can teach it to other people who want to learn how to do it and be great at it like yourself." (MB15551); and in keeping others safe, "I think this is the most important value because I don't want anybody to get hurt. I think this value should be taught before anybody does anything that might be a little daring or are unsafe. I just don't like seeing people getting hurt" (MM16251).

Fear and an awareness of death was another common theme. Students wanted to have a good time, because they knew life is short and they only live once. They wanted safety and security, because the alternative is dangerous. A peaceful and just world is desirable, in part, "because it is not safe around here with people shooting and kidnapping ...etc." (FB17408); "I would love to live in a world that I could go out or something and not think of getting killed or kidnapped" (FB18163). Fear of the afterlife was the reason Respecting Traditions was the most important value for some students: "If I don't live or worship the exact way that the bible says I should then I will spend eternity in hell. But if I do the exact opposite I will spend my life in heaven with God for all eternity" (FB18626).

Many students framed their most important value as having an impact on their future or on the future of society. Respecting traditions held the key for one student:

I want to be the most religious I can so I can learn about me in general. When I do something I want to do it my best and what I think is right. after finding myself I will find my talents and I will use that to my advantage. so my career will be successful as possible. When people look up to me they will hopefully find a handsome man with the world on his shoulders. After that they will want to be like me and I will be the true leader that I want to be in my lifetime. (MB16577)

A peaceful and just world would mean a bright future for everyone, as this student wrote,

It's most important to me because it will also help everyone around me. If everyone in the world was equal then we wouldn't have wars and we could have world peace. If the environment was protected then we wouldn't have holes in the ozone layer and gas that shouldn't be there in the air. If everyone had an open mind then we wouldn't have the shootings that we have and the fights we have had. A world of beauty would be amazing because then the world would just be amazing. Then no one would fight and we could have world peace. (FW16842)

Patterns of Change Over Time

Demographics and mean rank values of the 7th graders who also participated in the 8th grade ($n = 139$) mirrored those of the full sample, indicating the subsample was a good representation of the full sample. Only 19% ($n = 41$) of 8th grade students had the same most important value as in the 7th grade and only 26% ($n = 57$) of 8th grade most important values were in the same dimension as in the 7th grade. Students who had chosen socially focused CO or ST values as most important in the 7th grade were more likely to choose values in the same dimension in the 8th grade, $\chi^2(1, N = 139) = 46.45, p < .001$. Seventh graders who had chosen the personal focus values of SE or OC chose 8th grade values from across the spectrum. There was a slight tendency for 8th grade most important values to be in the CO dimension, with 34% of 8th graders versus 30% of 7th graders (see Table 3). There were not statistically significant differences in the proportion of girls and boys who kept or changed their most important values from year to year ($\chi^2(1, N = 139) = .762, p = .38$). In addition to improved writing quality, the 8th grade comments indicate increasing maturity, particularly among the females. The same themes of Others, Fear/Death Awareness, and Future Oriented were present in the 8th grade comments, but two new themes rose to prominence. Several students wrote about their values as being part of their identity—part of who they are or their purpose in life (see Table S2 in Supplemental Materials). Failure, which had been mentioned infrequently by 7th graders, was a more common concern for the 8th graders who most valued being successful. According to the mean rank analysis, "A peaceful, just world" increased in importance in the 8th grade sample (see Table 2). This abstract value became most important to more of the 8th graders than 7th (19.4%, 13.1% respectively; see Table 3). "Being popular and influential" was most important to only one 8th grader, who gave an other-oriented reason: "Because people need to know that like I'm here and that they can come to me but they will only know unless [sic] I make myself known" (FM17833).

Discussion

This study sheds light on the thought processes of a little studied population: middle school students from low-income backgrounds who have been identified for their high ability. These students are often underrepresented in gifted education programs and are, therefore, also underrepresented in the literature of the field. A deeper understanding of their values offers insights that may lead to effective means of support.

No efforts were made through the program to prime students' values, as is done in some interventions (e.g., Maio et al., 2009). Therefore, students' responses should reflect their extant values upon entering the program. The purpose of the values affirmation activity was solely to

support the students in what was a potentially threatening environment (Cook et al., 2012; Steele, 1988): attending a two-week residential, STEM-related, advanced academic camp on a college campus.

Value Rankings

In 7th grade, these middle-school students consider values across the circumplex (Schwartz, 1992) more or less important, with no emphasis on one dimension. The top and bottom four ranked values (see Table 2) represent each of the dimensions SE, OC, CO, and ST. The rise in the mean rank of the ST value "A peaceful, just world" in the 8th grade may be related to the high ranking of "Being safe and secure." The move from childhood egocentrism is accompanied by a greater awareness of the outside world. Based on students' written responses, that world seems like a dangerous place to many of them. The increasing independence that comes with adolescence may make these middle school students feel a greater responsibility for their own safety, increasing the importance of "Being safe and secure."

The lowest ranked value in both 7th and 8th grade was "Being popular and influential," which dropped significantly lower in the mean rankings in the second year. This is consistent with Piirto's (2005) finding among gifted adolescents (ages 14-17) that social recognition was considered unimportant. Sagiv and Roccas (2017) pointed out, however, that all values are desirable to some degree; none are viewed as undesirable. Rank ordering minimizes our ability to discriminate just how desirable popularity may have been to the students in this study. As a guiding principle in life, they did not consider it very important.

Sex differences in value preferences are strongly supported by research, with males preferring SE and OC values and females preferring ST and CO values (Schwartz & Rubel, 2005). Döring et al. (2015) found significant sex differences in the value preferences of the 7- to 11-year-old children in their cross-cultural study. ST and CO values were more important among the girls and SE values were more important among the boys and OC values were not different. In the present study, however, no sex differences were found in value preferences. Sex differences of values in a gifted sample were attenuated in Lubinski et al.'s (1996) longitudinal study. Future research is needed to clarify whether the lack of sex differences in this study is associated with students' high-ability, economic disadvantage, or another factor.

Most Important Value Frequencies

The value dimensions most frequently identified as most important were ST (24%, see Table 3) and CO (30%). Economic status plays an important role in the development of values. Schwartz and Rubel-Lifschitz (2009) point out that, "Greater wealth, individual freedom, and cultural autonomy make it easier to pursue values like self-direction and hedonism successfully, and they make it

less necessary to pursue anxiety-based values like power, security, and conformity" (p. 172). In this low-income sample, environmental pressures may foster conservation values. There is not comparable research among other, less economically disadvantaged middle school students to know whether they would also express fear and an awareness of death as commonly as the students in this study. These students have exhibited the potential for exceptional accomplishments, offering an advantage that could temper the need to pursue conservation values. Many students (16%, see Table 3) considered the self-enhancement value of "being successful" most important, but we must acknowledge the presence of the theme of Others in their explanations of why it is most important to them. In their study of values among young children, Benish-Weisman et al. (2019) found that benevolence was related to conservation values. They interpreted this to mean that the social focus among children is motivated by a desire to conform, by keeping social norms and obeying rules. The low-income, high-ability students in this study may be representing either of these positions—conservation values in response to environmental threats to their security or conservation values to maintain social connections.

At middle school age, these students are in the process of developing their values, in concert with other developmental changes of adolescence. As their identities are coming into focus, the values that motivate their behavior become increasingly important, as several 8th grade students commented. In Ciecuch et al.'s (2016) longitudinal study, CO values became less important to the 11-year-olds, replaced by OC values, but the 8th graders in this sample did not exhibit this pattern. There was an increase in CO values, instead. Those who had selected CO values as most important in the 7th grade were more likely to choose a most important value in that dimension a year later. The available data does not suggest that the values of the subset of students who returned to the camp for a second summer were different from those who did not. This trend of increased importance of CO values may be an impact of economic disadvantage. The students were from a variety of schools and were 7th and 8th graders at different times, so it is unlikely a single event would have caused this trend (e.g., the 9/11 attacks; Murphy et al., 2004). Rather than a move toward OC, the ST value of "A peaceful, just world" gained importance in this sample.

An Awareness of Others

The themes of Others, Fear / Death Awareness, and Future Oriented indicate the importance of values as a reflection of socialization processes. Many students commented on the importance of others in one's life and the need to behave in ways that support others' well-being. Benevolence (self-transcendent) values can be evoked through planned interventions (Arieli et al., 2014), but many of these students have likely developed an awareness

and concern for others through their social experiences. Social embeddedness was a major theme in another study of students in this population (Cross et al., 2018), who felt supported in their communities by family members, friends and teachers. This was a stark contrast to the high-income students of that study, who experienced conflict and frustration with their peers and teachers, who they perceived to be barriers to their achievement.

Values develop in part through socialization processes. Davis and Carlo (2020) proposed socialization of low-income adolescents to have strong moral convictions and to be prosocial may have protective effects. The adolescents in their study reported high levels of altruistic prosocial behaviors, in keeping with the emphasis on self-transcendence values of many students in the present study. In their longitudinal study of achievement values and peer relations from second to seventh grade, Taylor and Graham (2007) found low-SES African American and Latino adolescent boys, but not girls, were increasing likely to select peers who placed a low value on achievement. Toughness and being "cool" were associated with popularity among African American youth (Juvonen et al., 2003). The socialization away from academic pursuits may have more to do with the environmental pressures to be safe (i.e., tough) than an actual dislike of learning or school (Richardson & Vil, 2016). How such changes are associated with the students' values has not been explored. Affirmation of one's values may support an academic focus, but even such wise interventions cannot alter a dangerous reality.

Caring relationships with others and a sense of belonging are basic human needs (Deci & Ryan, 2000; Maslow, 1987). In high poverty environments, they can be critical to survival. The CO values of conformity and tradition "derive from the need to inhibit behavior that might disrupt social relations and undermine group solidarity" (Schwartz & Rubel-Lifschitz, 2009, p. 174). The students in this study are keenly aware of the needs and expectations of family and community members. Attempts to encourage independence or to prioritize individual achievement above relational needs are likely to cause dissonance in many of these high-ability students. Such efforts may do real harm to their well-being. This suggests the need for educators to acknowledge and similarly prioritize their students' relationships with others.

The Appearance of Fear and Death Awareness

Death awareness is common in child's play, even at an early age (Corr, 2010), so it should not be surprising that it influences the values these young adolescents hold as most important. Children are often aware of death and neglecting to talk about it with them can be detrimental to their well-being. "So often parents and other adults realize only in retrospect that children have been aware of what they perceive as important events in their lives." (Corr, 2010, p. 21). Without adult guidance, children will

reach their own conclusions about the events transpiring in their surroundings. It is critical that adults communicate effectively about death or risk the child's own interpretation of their risk and the meaning of death (Corr, 2010). The United States is a dangerous place, especially for African American males (Reeves et al., 2020), but also for all those living in low-income environments (American Psychological Association, 2010; Finch & Finch, 2020; Office of Disease Prevention and Health Promotion, 2020). It makes sense that the very real fears of the high-ability, low-income middle schoolers in this study surface in the values they consider paramount guiding principles.

Students who feel a part of their school and believe they are safe and supported there are more likely to engage and persist (Eccles & Roeser, 2009). Although most individuals have little power to affect high-poverty environments, working towards a supportive school environment where their needs are met may foster engagement and persistence. Students in the same academic program as the students in this study reported on their school climate, including the victimization that occurs (Frazier et al., 2021). While all students in the Frazier et al. study reported high levels of identification with school, those who reported higher levels of bullying, less trust in adults to respond to victimization, and feeling less safe had lower pride and feelings of belonging at the school. Low-income, high ability students in earlier years of the same summer camp reported "mayhem" in their schools, with disruptive peer behavior, frequent fighting, and an intimidating police presence (Cross et al., 2018). In such settings, a value of safety could overtake a value of achievement as most important. Societies should be able to ensure their students feel safe and secure, at least during their time at school.

Envisioning a Bright Future

One foundational component of values is that they "pertain to desirable end states or behaviors" (Schwartz, 1992, p. 4). As such, thinking about their most important value primes these students to consider their future. The values they hold will help them achieve a desirable future. For some, this will come through conforming to others' expectations. For others, it will come through being successful at what they do. Each "most important" value has implications for their future. Focusing these students on a future that includes academic success is a stated goal of the summer program and, in the two weeks following the values affirmation activity, they were exposed to stimulating STEM coursework, professional role models, and guidance in academic planning. Students in wealthy families likely receive such exposure through family connections (Cross et al., 2018). The values affirmation activity encourages forward thinking and has the potential for long-lasting effects on this low-income, high-ability population (Cook et al., 2012). In combination with

other activities during the camp, students are given a powerful opportunity to consider different possible selves (Oyserman et al., 2006) in their futures.

Maturing Values

Value orientations among the students who participated in the 8th grade indicate their developmental nature. The greatest stability was seen in the CO and ST dimensions. Students who valued CO and ST dimensions as most important in the 7th grade were more likely than their peers to have a similar most important value in the 8th grade (see Table 3). Many students, however, were less fixed on what values should be their guiding principle. Helping middle schoolers explore their values may support their identity development and, subsequently, their success in school.

Some eighth graders appeared to be internalizing their values, describing their pursuit as part of who they are or their purpose in life. Several 8th graders expressed a desire to avoid failure in their activities (see Table S2 in Supplemental Materials), suggesting an increasing awareness of their competence and its effects on reputation, perhaps in response to greater competition or rigor in school. Failure is not altogether a negative experience, as resilience develops from risk-taking. A focus on personal growth over successful outcomes can have positive effects on students' approach to new, more challenging material (Blackwell et al., 2007). Middle school students may benefit from growth mindset interventions (Walton & Wilson, 2018) before a fear of failure becomes established.

Conclusion

We are all in the business of socialization, educators included. Care must be taken, however, that we do not fall into the indoctrination trap. Critical thinking, a paramount value in education (Kuhn, 2005) requires an open mind, which may conflict with values of conformity. Conformity, however, may be necessary for survival in a hostile environment. A teacher who has not experienced poverty may have difficulty understanding the value orientations of students whose basic needs are not always

met. There is danger in presuming we can know what values others hold (Hanel et al., 2018). Desirable end states fit within a frame that is shaped by experience and socialization. Supporters of gifted education may agree that maximizing potential is the goal of their field (Cross et al., 2010), but what is the frame through which they define "maximizing"? If individual achievement is the primary orientation of a gifted education program, these other-oriented students are likely to find a poor fit.

The circumplex model of human values (Schwartz, 1992; Schwartz et al., 2012) offers an important perspective for educators and decisionmakers. Pursuit of values in one dimension attenuates or even precludes pursuit of values in the opposing dimension (Maio et al., 2009). Achievement is a self-enhancing value, bringing success and material goods to the achiever. The more one focuses on enhancing the self, the less able they are to support the well-being of others; to transcend the self. The circumplex describes continua, however, not dichotomies. One may hold "Being successful at what I do" as their most important value, while simultaneously giving a high priority to the needs, expectations, and desires of others. The high-ability, low-income students of this study exhibit just such a nuanced value orientation.

Can schools, which so highly prioritize individual achievement, especially in an age of accountability, support students' self-transcendence? Schools can have an impact on students' values. Principals' values directly impact school climate and the values of students who attend their schools are influenced by those adults' values (Berson & Oreg, 2016). The beliefs of adults in schools create an ecosystem within which students are being socialized. A better understanding of which values are given the highest priority and how that affects students may lead to more responsive environments. Although the sample of this study is limited to a relatively small group of students in one region, the findings suggest high-ability, low-income middle school students will thrive in schools where there is respect for their relationships with others, where their fears are addressed through improved safety structures, and where opportunities are provided that enable them to achieve the future they envision.

References

- Allport, G. W., Vernon, P. E., & Lindzey, G. (1960). *Study of values* (3rd ed.). Houghton Mifflin.
- American Psychological Association. (2010). Violence & socioeconomic status. <https://www.apa.org/pi/ses/resources/publications/violence>
- Arieli, S., Grant, A. M., & Sagiv, L. (2014). Convincing yourself to care about others: An intervention for enhancing benevolence values. *Journal of Personality*, 82, 15-24. <https://doi.org/10.1111/jopy.12029>
- Bardi, A., & Goodwin, R. (2011). The dual route to value change: Individual processes and cultural moderators. *Journal of Cross-Cultural Psychology*, 42, 271-287. <https://doi.org/10.1177/0022022110396916>
- Barnea, M., & Schwartz, S. H. (1998). Values and voting. *Political Psychology*, 19, 17-40.

- Benish-Weisman, M., Daniel, E., Sneddon, J., & Lee, J. (2019). The relations between values and prosocial behavior among children: The moderating role of age. *Personality and Individual Differences, 141*, 241-247. <https://doi.org/10.1016/j.paid.2019.01.019>
- Berson, Y., & Oreg, S. (2016). The role of school principals in shaping children's values. *Psychological Science, 27*, 1539-1549. <https://doi.org/10.1177/0956797616670147>
- Bilsky, W. & Schwartz, S. H. (1994). Values and personality. *European Journal of Personality, 8*, 163-181. <https://doi.org/10.1002/per.2410080303>
- Blackwell, L. S., Trzesniewski, K. H., & Dweck, C. S. (2007). Implicit theories of intelligence predict achievement across an adolescent transition: A longitudinal study and an intervention. *Child Development, 78*, 246-263. <https://doi.org/10.1111/j.1467-8624.2007.00995.x>
- Cieciuch, J., Davidov, E., & Algesheimer, R. (2016). The stability and change of value structure and priorities in childhood: A longitudinal study. *Social Development, 25*, 503-527. <https://doi.org/10.1111/sode.12147>
- Cohen, G. L., Garcia, J., Purdie-Vaughns, V., Apfel, N., & Brzustoski, P. (2009). Recursive processes in self-affirmation: Intervening to close the minority achievement gap. *Science, 324*, 400-403. <https://doi.org/10.1126/science.1170769>
- Cohrs, J.C., Moschner, B., Maes, J., & Kielmann, S. (2005). Personal values and attitudes toward war. *Peace and Conflict: Journal of Peace Psychology, 11*, 293-312. https://doi.org/10.1207/s15327949pac1103_5
- Cook, J. E., Purdie-Vaughns, V., Garcia, J., & Cohen, G. L. (2012). Chronic threat and contingent belonging: Protective benefits of values affirmation on identity development. *Journal of Personality and Social Psychology, 102*, 479-496. <https://doi.org/10.1037/a0026312>
- Corr, C. A. (2010). Children's emerging awareness and understandings of loss and death. In C. A. Corr & D. E. Balk (Eds.), *Children's encounters with death, bereavement, and coping*. (pp. 21-37). Springer.
- Crocker, J., Niiya, Y., & Mischkowski, D. (2008). Why does writing about important values reduce defensiveness? Self-affirmation and the role of positive other-directed feelings. *Psychological Science, 19*, 740-747. <https://doi.org/10.1111/j.1467-9280.2008.02150.x>
- Cross, J. R., Bugaj, S. J., & Mammadov, S. (2016). Accepting a scholarly identity: Gifted students, academic crowd membership, and identification with school. *Journal for the Education of the Gifted, 39*, 23-48. <https://doi.org/10.1177/0162353215624162>
- Cross, J. R., Cross, T. L., & Finch, W. H. (2010). Maximizing student potential versus building community: An exploration of right-wing authoritarianism, social dominance orientation, and preferred practice among supporters of gifted education. *Roepfer Review, 32*, 235-248. <https://doi.org/10.1080/02783193.2010.508155>
- Cross, J. R., Frazier, A. D., Kim, M., & Cross, T. L. (2018). A comparison of perceptions of barriers to academic success among high-ability students from high- and low-income groups: Exposing poverty of a different kind. *Gifted Child Quarterly, 62*, 111-129. <https://doi.org/10.1177/0016986217738050>
- Davis, A. N. & Carlo, G. (2020). Maternal warmth and prosocial behaviors among low-SES adolescents: Considering interactions between empathy and moral conviction. *Journal of Moral Education, 49*, 226-240. <https://doi.org/10.1080/03057240.2019.1573723>
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*, 227-268. https://doi.org/10.1207/S15327965PLI1104_01
- Döring, A. K., Makarova, E., Herzog, W., & Bardi, A. (2017). Parent-child value similarity in families with young children: The predictive power of prosocial educational goals. *British Journal of Psychology, 108*, 737-756. <https://doi.org/10.1111/bjop.12238>
- Döring, A. K., Schwartz, S. H., Cieciuch, J., Groenen, P. J. F., Glatzel, V., Harasimczuk, J., Janowicz, N., Nyagolova, M., Scheefer, E. R., Allritz, M., Milfont, T. L., & Bilsky, W. (2015). Cross-cultural evidence of value structures and priorities in childhood. *British Journal of Psychology, 106*(4), 675-699. <https://doi.org/10.1111/bjop.12116>
- Eccles, J. S., & Roeser, R. W. (2009). Schools, academic motivation, and stage-environment fit. In R. M. Lerner & L. Steinberg (Eds.), *Handbook of adolescent psychology* (3rd ed., pp. 404-434). Wiley. <https://doi.org/10.1002/9780470479193.adlpsy001013>
- Finch, W. H., & Finch, M. A. (2020). Poverty and Covid-19: Rates of incidence and deaths in the United States during the first 10 weeks of the pandemic. *Frontiers in Sociology, 5*, 47. <https://doi.org/10.3389/fsoc.2020.00047>
- Fletcher, K. L., & Speirs Neumeister, K. L. (2012). Research on perfectionism and achievement motivation: Implications for gifted students. *Psychology in the Schools, 49*, 668-677. <https://doi.org/10.1002/pits.21623>
- Frazier, D., Cross, J. R., Cross, T. L., & Kim, M. (2021). "The spirit is willing": A study of school climate, bullying, self-efficacy, and resilience in high-ability low-income youth. *Roepfer Review, 43*, 7-20. <https://doi.org/10.1080/02783193.2020.1840465>
- Hanel, P. H. P., Wolfradt, U., Coelho, G. L. de H., Wolf, L. J., Vilar, R., Monteiro, R. P., Gouveia, V. V., Crompton, T., & Maio, G. R. (2018). The perception of family, city, and country values is often biased. *Journal of Cross-Cultural Psychology, 49*(5), 831-850. <https://doi.org/10.1177/0022022118767574>
- Hitlin, S. (2003). Values as the core of personal identity: Drawing links between two theories of self. *Social Psychology Quarterly, 66*, 118-137. <https://doi.org/10.2307/1519843>
- Juvonen, J., Graham, S., & Schuster, M. (2003). Bullying among young adolescents: The strong, the weak, and the troubled. *Pediatrics, 112*, 1231-1237. <https://doi.org/10.1542/peds.112.6.1231>
- Kuhn, D. (2005). *Education for thinking*. Harvard University Press.

- Logel, C., Kathmandu, A., & Cohen, G. L. (2019). Affirmation prevents long-term weight gain. *Journal of Experimental Social Psychology*, 81, 70-75. <https://doi.org/10.1016/j.jesp.2018.07.005>
- Lubinski, D., Schmidt, D. B., & Benbow, C. P. (1996). A 20-year stability analysis of the study of values for intellectually gifted individuals from adolescence to adulthood. *Journal of Applied Psychology*, 81, 443-451. <https://doi.org/10.1037/0021-9010.81.4.443>
- Maio, G. R., Pakizeh, A., Cheung, W.-Y., & Rees, K. J. (2009). Changing, priming, and acting on values: Effects via motivational relations in a circular model. *Journal of Personality and Social Psychology*, 97(4), 699-715. <https://doi.org/10.1037/a0016420>
- Mammadov, S., Cross, T. L., & Ward, T. J. (2018). The Big Five personality predictors of academic achievement in gifted students: Mediation by self-regulatory efficacy and academic motivation. *High Ability Studies*, 29(2), 111-133. <https://doi.org/10.1080/13598139.2018.1489222>
- Markus, H., & Nurius, P. (1986). Possible selves: The interface between motivation and the self-concept. In K. Yardley & T. Honess (Eds.), *Self and identity: Psychosocial perspectives*, (pp. 157-172). Wiley.
- Maslow, A. H. (1987). *Motivation and personality* (2nd ed.). Harper & Row.
- McHugh, M. L. (2012). Interrater reliability: The kappa statistic. *Biochemia Medica*, 22, 276-82. <https://doi.org/10.11613/BM.2012.031>
- McQueen, A., & Klein, W. (2006). Experimental manipulations of self-affirmation: A systematic review. *Self and Identity*, 5, 289-354. <https://doi.org/10.1080/15298860600805325>
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed.). Sage.
- Miyake, A., Kost-Smith, L. E., Finkelstein, N. D., Pollock, S. J., Cohen, G. L., & Ito, T. A. (2010). Reducing the gender achievement gap in college science: A classroom study of values affirmation. *Science*, 330(6008), 1234-1237. <https://doi.org/10.1126/science.1195996>
- Murphy, E. F., Gordon, J. D., & Mullen, A. (2004). A preliminary study exploring the value changes taking place in the United States since the September 11, 2001 terrorist attack on the World Trade Center in New York. *Journal of Business Ethics*, 50, 81-96. <https://doi.org/10.1023/B:BUSI.0000020879.93654.86>
- Office of Disease Prevention and Health Promotion. (2020). Poverty. <https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-health/interventions-resources/poverty>
- Oyserman, D., Bybee, D., & Terry, K. (2006). Possible selves and academic outcomes: How and when possible selves impel action. *Journal of Personality and Social Psychology*, 91, 188-204. <https://doi.org/10.1037/0022-3514.91.1.188>
- Piirto, J. (2005). I live in my own bubble: The values of talented adolescents. *Journal of Secondary Gifted Education*, 16, 106-118. <https://doi.org/10.4219/jsge-2005-472>
- Reeves, R. V., Nzau, S., & Smith, E. (2020, November 19). The challenges facing Black men—and the case for action. <https://www.brookings.edu/blog/up-front/2020/11/19/the-challenges-facing-black-men-and-the-case-for-action/>
- Richardson, J. B., & Vil, C. S. (2016). 'Rolling dolo': Desistance from delinquency and negative peer relationships over the early adolescent life-course. *Ethnography*, 17(1), 47-71. <https://doi.org/10.1177/1466138115609624>
- Rokeach, M. (1973). *The nature of human values*. Free Press.
- Rokeach, M., & Cochrane, R. (1972). Self-confrontation and confrontation with another as determinants of long-term value change. *Journal of Applied Social Psychology*, 2, 283-292. <https://doi.org/10.1111/j.1559-1816.1972.tb01280.x>
- Sagiv, L., & Roccas, S. (2017). What personal values are and what they are not: Taking a cross-cultural perspective. In S. Roccas & L. Sagiv (Eds.), *Values and behavior: Taking a cross cultural perspective* (pp. 3-13). Springer. https://doi.org/10.1007/978-3-319-56352-7_1
- Schuster, C., Pinkowski, L., & Fischer, D. (2019). Intra-individual value change in adulthood: A systematic literature review of longitudinal studies assessing Schwartz's value orientations. *Zeitschrift Für Psychologie*, 227(1), 42-52. <https://doi.org/10.1027/2151-2604/a000355>
- Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 25, pp. 1-65). Academic Press. [https://doi.org/10.1016/S0065-2601\(08\)60281-6](https://doi.org/10.1016/S0065-2601(08)60281-6)
- Schwartz, S. H., Cieciuch, J., Vecchione, M., Davidov, E., Fischer, R., Beierlein, C., ... Konty, M. (2012). Refining the theory of basic individual values. *Journal of Personality and Social Psychology*, 103, 663-688. <https://doi.org/10.1037/a0029393>
- Schwartz, S. H., & Rubel, T. (2005). Sex differences in value priorities: Cross-cultural and multimethod studies. *Journal of Personality and Social Psychology*, 89, 1010-1028. <https://doi.org/10.1037/0022-3514.89.6.1010>
- Schwartz, S. H., & Rubel-Lifschitz, T. (2009). Cross-national variation in the size of sex differences in values: Effects of gender equality. *Journal of Personality and Social Psychology*, 97, 171-185. <https://doi.org/10.1037/a0015546>
- Sherman, D.K., & Cohen, J.L. (2006). The psychology of self-defense: Self-affirmation theory. In M.P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 38, pp. 183-242). Academic Press. [https://doi.org/10.1016/S0065-2601\(06\)38004-5](https://doi.org/10.1016/S0065-2601(06)38004-5)
- Snyder, K. E., Barger, M. M., Wormington, S. V., Schwartz-Bloom, R., & Linnenbrink-Garcia, L. (2013). Identification as gifted and implicit beliefs about intelligence: An examination of potential moderators. *Journal of Advanced Academics*, 24(4), 242-258. <https://doi.org/10.1177/1932202X13507971>
- Steele, C. (1988). The psychology of self-affirmation: Sustaining the integrity of the self. *Advances in Experimental Social Psychology*,

- 21, 261-302. [https://doi.org/10.1016/S0065-2601\(08\)60229-4](https://doi.org/10.1016/S0065-2601(08)60229-4)
- Strauss, A. L. (1990). Systematic coding in qualitative research. *Bulletin of Sociological Methodology / Bulletin de Méthodologie Sociologique*, 27, 52-62 <https://doi.org/10.1177/075910639002700103>
- Taylor, A. Z., & Graham, S. (2007). An examination of the relationship between achievement values and perceptions of barriers among low-SES African American and Latino students. *Journal of Educational Psychology*, 99, 52-64. <https://doi.org/10.1037/0022-0663.99.1.52>
- Uzefovsky, F., Döring, A. K., & Knafo-Noam, A. (2016). Values in middle childhood: Social and genetic contributions. *Social Development*, 25, 482-502. <https://doi.org/10.1111/sode.12155>
- Vecchione, M., Schwartz, S. H., Alessandri, G., & Marsicano, G. (2020). Stability and change of basic personal values in early adolescence: A 2-year longitudinal study. *Journal of Personality*, 88, 447-463. <https://doi.org/10.1111/jopy.12502>
- Walton, G. M., & Wilson, T. D. (2018). Wise interventions: Psychological remedies for social and personal problems. *Psychological Review*, 125(5), 617-655. <https://doi.org/10.1037/rev0000115>
- Yeager, D. S., & Walton, G. M. (2011). Social-psychological interventions in education: They're not magic. *Review of Educational Research*, 81, 267- 301. <https://doi.org/10.3102/0034654311405999>

Author Information

Jennifer Riedl Cross, Ph.D. is Director of Research at the William & Mary Center for Gifted Education. She is co-editor, with Tracy L. Cross, of the *Handbook for Counselors Serving Students with Gifts and Talents*, now in its second edition. Her research in the field emphasizes social and psychological aspects of gifted education.

Social Stress in Honors College Students: How Personality Traits, Perfectionism, Creativity, and Gender Predict Use of Social Coping Strategies

Angie L. Miller, Ph. D. 



Abstract

Much research has focused on how gifted children and adolescents deal with the social stigmas associated with giftedness. Previous studies indicate that several coping strategies exist, and these are related to personality and other characteristics. However, once these gifted individuals enter higher education, they are often required to shift their coping strategies to deal with stressors and situations in this new environment. This study investigates social coping strategies among honors college undergraduate students, looking at the need for updating the factor structure of a measure of social coping designed for and used with middle and high school students. Results suggest some variation in strategies for the honors college students. Additional results explore how personality traits, creativity, perfectionism, and other demographic characteristics predict the use of certain social coping strategies. This information can be used to mitigate the experience of social stress for this unique student population and address their needs through a supportive and accommodating environment.

Keywords: • honors college • social coping • personality traits • perfectionism • creativity

Literature Review

Previous research suggests that gifted individuals often feel they are different from other peers their age, and this difference can be exacerbated by the presence of a social stigma associated with giftedness, where gifted individuals do not feel they are entirely socially accepted due to their giftedness (T. Cross et al., 1993; T. Cross et al., 2014). Being labeled as "gifted," whether through formal educational identification programs or informal observations of academic performance, can result in heightened feelings of difference. This stigma can be damaging to social relationships, and even seemingly normal social interactions might be distorted if an individual believes these perceived differences are being consistently applied to them (Coleman & Cross, 1988). In order to deal with the associated social and emotional stress, gifted students acquire various strategies for navigating their educational environment and their interactions with peers of different academic abilities. These strategies can range from proactive to reactive, and from high visibility to invisibility.

It is essential to note that regarding social stigmas, it is less important to document whether the differential treatment is occurring, because if the stigmatized party believes the difference exists, it can influence social interactions nonetheless (Coleman & Cross, 1988). Gifted students may even go so far as to apply these negative stereotypes, in the abstract, to their gifted peers. How nongifted peers treat gifted students can also color future social interactions, even those with their gifted peers

(Manor-Bullock et al., 1995). Even younger (elementary-school aged) students are aware of the social stigma and are known to develop coping strategies that can either positively or negatively impact their social interactions (Eddles-Hirsch et al., 2012). Students tend to experience less stress and fewer emotional issues when schools provide formal support structures to promote inclusion and thus reduce the effect of the stigma (Eddles-Hirsch et al., 2012). The health and social psychology literature has documented that long-term experience as a member of a stigmatized group is associated with chronic stress and other lasting negative social and physical outcomes, with adverse effects on mental and physical health (Frost, 2011; Hatzenbuehler, 2013; Link & Phelan, 2006; Major & O'Brien, 2005). Therefore, it is crucial to address these issues and help individuals experiencing social stigma to develop adequate strategies for coping and stress management. If students have negative experiences in elementary, middle, or high school, they may potentially carry these memories and any resulting learned coping behaviors as they move into higher education settings, even though the specifics of the situations could differ.

Developed initially from a literature review of stress and social difficulties encountered by gifted children and adolescents, the Social Coping Questionnaire (SCQ; Swiatek, 1995) has been used in many studies with gifted samples over the past three decades. The initial study was done with a sample of 10- to 17-year-olds participating in a gifted summer program, using their responses to survey items developed by a team of experts in the field after reviewing the literature on social stigma and coping for the gifted. A factor analysis with this data suggested five distinct strategies: Denial of Giftedness, Popularity/Conformity, Peer Acceptance, Fear of Failure, and Activity. However, subsequent use of the instrument has found that the factor structure and internal consistency

often varies depending on the characteristics of the sample. Consequently, accommodations frequently must be made to add or rename strategies that emerge from factor analyses such as helping others, use of humor, and unconcerned (Swiatek, 2001; Swiatek & Dorr, 1998). Research utilizing the measure has found differences in coping depending on the age (Foust et al., 2006; Rudasill et al., 2007; Swiatek & Cross, 2007), gender (Foust et al., 2006; Rudasill et al., 2007), and cultural background (Chan, 2003, 2004, 2005, 2006; Cross et al., 2015; Lee et al., 2012) of the respondents. Furthermore, the instrument has been primarily used with adolescents (Chan, 2003, 2006; Cross & Swiatek, 2009; Jung et al., 2012; Lee et al., 2012; Swiatek, 2001; Swiatek & Dorr, 1998), and sometimes with older children as well (Chan, 2004; Cross et al., 2015; Foust et al., 2006; Rudasill et al., 2007; Swiatek, 1995, 2002; Swiatek & Cross, 2007).

Personality

The "Big Five" or "Five-Factor Model of Personality" is one of the most widely known theories of basic personality traits (Costa & McCrae, 1987). The model includes the five factors of extraversion, agreeableness, conscientiousness, neuroticism, and openness/intellect. Extraversion references the extent to which individuals are sociable, excitable, talkative, and emotionally expressive. Agreeableness describes the extent to which individuals are trusting, amicable, compassionate, and exhibit prosocial behaviors. Conscientiousness portrays the extent to which individuals attend to details in their work, have high levels of effortful control, and demonstrate and persevere with goal-directed behaviors. Neuroticism (sometimes also termed "Emotional Stability") describes the extent to which individuals display negative affect, unstable moods, and low emotional control. Finally, Openness to Experience (sometimes also termed "Intellect") expresses the extent to which individuals are curious, creative, and open-minded.

There is an abundance of research exploring connections between these five personality traits and several other psychological and demographic characteristics (Davis & Palladino, 2000; Mayhew, Selznik, et al., 2016). Some evidence suggests that extraversion might be related to specific social coping strategies such as humor, social interaction, and peer acceptance (Swiatek & Cross, 2007), but connections between social coping and other personality traits within the Five-Factor Model remained largely unstudied in gifted populations. There may also be differences in how individuals respond to stressors in the environment based on personality traits (O'Brien & DeLongis, 1996), and which coping strategies are preferred (Connor-Smith & Flachsbart, 2007).

Perfectionism

Another area of research that concerns the social and emotional development of gifted individuals is the construct of perfectionism. There are several

theoretical models of perfectionism. Hewitt and Flett's (1991) Multidimensional Perfectionism Scale (MPS) conceptualized three different dimensions of perfectionism, all of which focus on setting unrealistic standards and expectations. Individuals scoring high on self-oriented perfectionism (SOP) set unrealistic standards and expectations for themselves. Individuals scoring high on socially prescribed perfectionism (SPP) perceive others as placing unrealistic expectations or standards for them. Finally, those individuals scoring high on other-oriented perfectionism (OOP) hold unrealistic expectations and standards for others. While there is debate over the precise nature and effects of perfectionism among gifted individuals (Greenspon, 2000; Parker 1997, 2002), there is also evidence to suggest that for at least some conceptualizations, perfectionism is a typical quality for many high ability individuals (Parker & Adkins, 1995; Roberts & Lovett, 1994; Schuler, 2000; Speirs Neumeister, 2004, 2017).

Research has associated perfectionism with a variety of adverse outcomes, with several mediating factors identified as well. Some aspects of perfectionism are linked to depression, suicide ideation, general anxiety, substance abuse issues, migraines, and eating disorders (Blatt, 1995; Flett & Hewitt, 2002). Rice and colleagues (2006) found evidence of connections between perfectionism and several aspects of distress among a sample of honors students, including perceived stress, lack of social connectedness, depression, hopelessness, and lack of academic adjustment. Moreover, this particular study found that the negative effects of perfectionism can be intensified by stress, but can also be reduced with strong social connections. Similarly, Chang (2000) found that in samples of both younger and older adults, perfectionism was mediated by stress, with higher amounts of experienced stress decreasing reported life satisfaction as well as increasing negative mood and worry.

Creativity

Creativity is increasingly cited as a component of giftedness, yet it is also important to note that even among gifted individuals, creativity can vary based on the particular definition or type of creativity. There is not full agreement in the field regarding the exact nature or definition of creativity (Davis, 2004). For the purpose of this study, a general description is any behavior or outcome that is both novel and appropriate (Brown, 1989; Runco & Jaeger, 2012), which is the most widely accepted definition in the field. There is some debate over whether creativity functions differently across various domains (Baer, 2012) or whether it is a general set of skills that crosses content areas (Plucker, 1998). However, since the present study looks at a broad array of individuals, it is more fitting to use a domain-general perspective.

As definitions of creativity have progressed, many measures have been established correspondingly. These measures range from self-report instruments (Gough, 1979; Runco et al., 2001) to divergent thinking assessments (Torrance, 1998) to creative product ratings (Amabile, 1996). From a basic methodological standpoint, self-report measures are usually more efficient to administer to large samples (Whitley, 2002) while still retaining the potential to address multiple aspects of creativity through the creation of different subscales. A variety of dimensions are included in these assessments. Some aspects might be deemed more cognitive in nature, such as use of imagination or intellectual problem solving. Other measures are more aligned with an individual's behaviors, such as engaging in creative activities. Still other elements of creativity are considered to be more related to personality, such as desire for spontaneity and openness to ideas. Measures can encapsulate multiple dimensions or focus on individual ones. One such multi-dimensional self-report instrument, the Scale of Creative Attributes and Behaviors (Kelly, 2004), centers on the measurement of Creative Engagement, Creative Cognitive Style, Spontaneity, Tolerance, and Fantasy. These different dimensions are described as follows:

Creative engagement refers to enjoying creative activities and routinely spending time working on something creative. Creative cognitive style refers to the cognitive aspect of creativity which has often been linked with intelligence (divergent thinking and problem solving). Spontaneity is a style characterized by impulsivity and excitement seeking. Tolerance is the attitude of flexibility and openness to ideas and experience. And finally, fantasy is a mental activity of creativity, namely daydreaming and imagination. (Kelly, 2004, p. 594)

Creativity has also been studied within gifted populations. Some research provides support for a slight creative advantage for gifted individuals. Runco (1987) found advantages in self-reported creative activities that were small in magnitude, while more recently, Guignard and colleagues (2016) found a modest relationship between intelligence and creativity in children in the verbal domain. However, other studies reveal more pronounced differences. For instance, Ward and colleagues (1999) found that gifted adolescents outperformed a control group of general education college students on a measure of creativity that involved generating several different ideas. The findings of another study (Miller, 2016) suggest small to moderate effect sizes when comparing the self-reported creativity scores of honors college and general education students.

Some research indicates that creative identity can be incorporated into coping mechanisms for gifted individuals (Sowa & May, 1997), although the exact functioning of this process needs more research. Furthermore, creative engagement has also been shown

to generally yield positive effects on psychological well-being (Csikszentmihalyi, 1996). Empirical research suggests that engaging in creative activities can serve to alleviate stress (Nicol & Long, 2010), and the more creative and innovative an organizational climate, the lower the perceived stress of the employees (Talbot et al., 1992). Creativity can have a social component as well, and there is empirical evidence connecting creative thinking to the use of humor (Murdock & Ganim, 1993; Ruch & Heintz, 2018). This connection is important, as there is a long history of research showing that humor is beneficial to mental health, including lowering loneliness and depression as well as raising self-esteem and well-being (Overholser, 1992; Nezelek et al., 2021; Schneider et al., 2018). Research also suggests that both intelligence and creative potential are related to humor production (Christensen et al., 2018; Kellner & Benedek, 2017), adding further nuance to the empirical connections between creativity and intelligence and a consideration for the current study as well.

Honors Colleges & Programs

It is crucial to point out that for any examination of high achieving students within honors colleges or programs, there are many differences in the goals and actual implementation of such programs. An "honors college" or "honors program" at one university might vary in a multitude of ways from a unit or program with the same title at another university. Admissions policies are created within a set of institutionally determined criteria (Cognard-Black & Spisak, 2019); sometimes honors students are admitted as first-years before starting at the university while others are granted honors status only after earning a minimum number of credit hours or based on a grade-point-average cutoff at the university (Schuman, 2006). However, because most honors colleges do include a minimum GPA (high school or college) requirement and/or standardized test criteria for admissions (Cognard-Black et al., 2017), yet do not require the IQ and other cognitive testing prominent in many K-12 programs (Carman, 2013), these students should technically be categorized as "high ability" (rather than "gifted"). This difference is necessary to consider when using honors college students in replications of research originally done with younger, traditionally identified gifted K-12 populations. Nonetheless, it is extremely likely that honors college students have been identified as gifted at some point during their previous schooling. It is a fairly common practice in gifted education research to use samples of undergraduate honors students as a proxy for gifted young adults (Rinn & Plucker, 2019).

While there tends to be great diversity in what an honors college looks like in practice, they nevertheless share some distinguishable features: Unique and more academically demanding versions of general education

courses, smaller class sizes for greater student-faculty interaction, and more rigorous courses such as colloquia or seminars (Cognard-Black et al., 2017; Fischer, 1996; Sederberg, 2005). Many of these classes are interdisciplinary, and students are free to choose from any major offered at the university. Students within honors colleges are often required to complete a final thesis, capstone, or creative project before graduation (Digby, 2005). A systematic exploration of honors curricula found that most programs require independent research elements, but there is more disparity when it comes to other high-impact practices such as internships, study abroad, and service learning (Cognard-Black & Savage, 2016). It is common for universities to also provide special residence halls or study rooms available exclusively for honors students (Reichert, 2007; Rinn & Plucker, 2019; Scott et al., 2017) in addition to honors-designated academic advisors (Johnson et al., 2018).

Students may start their honors program with strong expectations for their college experience (Rinn, 2008), yet these expectations may or may not be met, depending on the implementation of each program (Rinn & Plucker, 2004, 2019). Research indicates that participating in an honors program is related to various positive outcomes, including academic achievement, cognitive gains, academic self-concept, self-efficacy, and effective use of learning strategies (Furtwengler, 2015; Miller & Dumford, 2018; Rinn, 2007; Rinn & Plucker, 2019; Seifert, 2009; Seifert et al., 2007). Similarly, honors faculty are more likely to encourage use of learning strategies, collaborative learning, and student-faculty interaction (Miller et al., 2021). Furthermore, studies demonstrate that honors students are higher in subjective wellbeing, compared with their non-honors peers (Plominski & Burns, 2018), and report that honors participation included rewarding interpersonal experiences with other honors students (Mammadov et al, 2018; Perrone et al., 2010). Students in honors programs also report that the development of meaningful relationships with faculty is a major benefit of participation (Dean, 2019). All of these cognitive, social, and personal elements should be considered in attempts to extend research using gifted middle and high school samples to honors students in a higher education setting. While the literature supports a variety of positives associated with honors program participation (Young et al., 2016), less is known about potential negative experiences and outcomes of honors programs, and how early social experiences for the gifted are contributing to their college experience. It may be the case that once they reach their postsecondary education, these gifted students who previously experienced social stigma are in an environment where social coping strategies are less necessary.

The Current Study

After reviewing the literature, there is an apparent need for studies that explore social coping among high ability populations in higher education. Much of the study of

gifted individuals focuses on K-12 populations, but it is important to extend findings into adult populations as one does not "grow out" of giftedness (Streznewski, 1999). Given that many honors students have previously been identified as gifted, it is also important to explore more deeply the experiences of these students, as a means of bridging higher education and gifted education research. The current study will address this by 1) exploring the factor structure of a previously established measure of social coping strategies and 2) looking at psychological and demographic constructs that might predict the use of these established social coping strategies for honors college students. Honors students might have developed these strategies at various points in their educational paths, some beginning early on and others at later points. Because the educational and social experiences of college students are somewhat different from those of middle and high school students, it logically follows that once they reach higher education, individuals may need to alter their social coping strategies. Therefore, the first research question of this study will address the structure and frequency of use of these strategies in a sample of honors students. Once the structure for the use of these social coping strategies has been identified, the second research question will explore what other characteristics might be related to the use of each strategy, specifically looking at how demographics, personality traits, perfectionism, and creativity might predict the use of certain social coping strategies.

Method

Participants

The participants were 432 students in the honors college of a Midwestern university, ranging in age from 17 to 23 years ($M = 19.6$, $SD = 1.4$). The respondents were 26.4% male and 73.6% female. Each class was represented, with freshmen (40.9%), sophomores (24.3%), juniors (14.3%), and seniors (19.3%) included in the sample. The majority of students (93.5%) reported their ethnicity as Caucasian. Although there were more females than males, and more Caucasian than minority students in the sample, these respondent characteristics did not differ significantly from the demographics of the entire honors college population at this institution at the time of data collection, so the sample was highly representative and not biased in terms of gender or ethnicity. A majority (78%) of the students reported that at least one parent had completed a 4-year degree.

Admissions to the honors college is based upon standardized test scores (SAT and ACT), high school GPA, recommendations, and writing samples. Students apply for admission in concordance with their application to the university and begin taking honors courses in the first semester of their first year. Students admitted

Table 1: Cronbach's Alpha Coefficients

	Measure	# of items	Cronbach's α
Scale of Creative Attributes & Behaviors	Creative Engagement	4	.88
	Creative Cognitive Style	4	.81
	Spontaneity	4	.83
	Tolerance	4	.80
	Fantasy	4	.76
	Extraversion	8	.88
Big Five Inventory	Agreeableness	9	.80
	Conscientiousness	9	.83
	Neuroticism	8	.86
	Openness to Experience	10	.83
Multidimensional Perfectionism Scale	Self-Oriented	15	.91
	Other-Oriented	15	.82
	Socially Prescribed	15	.86

into the honors college have the option of living in the honors college designated residence hall, but it is not a requirement. The vast majority (92%) reported having participated in gifted programming during elementary, middle, and/or high school, although the types of programming and amount of exposure varied widely (acceleration, enrichment, extracurricular, etc.).

Data Collection Procedures

Students were recruited through an email requesting their participation in a research study about the psychological development of high ability students. All students in the honors college received this email, which contained a link to the online survey instrument, comprised of a battery of 12 instruments and demographic items. The surveys were completed online during a single untimed login session. An incentive raffle for a free mp3 player was used, and approximately 26% of all honors college students participated. Four separate recruitment periods took place over the spring of 2008, fall of 2008, spring of 2009, and spring of 2011. Students completing the survey instrument more than once had their second set of responses deleted from the sample, so each case in the data set represents a unique respondent.

Materials

Multidimensional Perfectionism Scale (MPS). The MPS (Hewitt & Flett, 1991) measured perfectionism with a 45-item scale to assess self-oriented, other-oriented, and socially prescribed perfectionism. Participants indicated their level of agreement with statements about certain perceptions and behaviors (i.e., "I strive to be the best at everything I do" and "My family expects me to be perfect") using a 7-point Likert-type scale ranging from "Disagree"

to "Agree." Three subscale scores were calculated from the responses, with higher scores indicating higher levels of perfectionism. Scores for each subscale can range from 15 to 105. Cronbach's alphas for the current study are found in Table 1.

Big Five Inventory (BFI-44). This revised version (John et al., 1991; John & Srivastava, 1999; reprinted in Benet-Martinez & John, 1998) of traditional Five-Factor Model measures is a 44-item non-timed inventory, providing information on the traits of neuroticism, extraversion, openness/intellect, agreeableness, and conscientiousness. The instrument instructs participants to indicate their level of agreement with statements about typical reactions and behaviors (e.g., "I see myself as someone who...has an active imagination" and "is reserved"), using a 5-point Likert-type scale ranging from "Disagree strongly" to "Agree strongly." Five subscale scores are provided, with higher scores indicating greater tendencies for the trait. Scores can range from 8 to 50, depending on the subscale. Cronbach's alphas for the current study are found in Table 1.

Scale of Creative Attributes and Behaviors (SCAB). The SCAB is a self-report creativity measure (Kelly, 2004) designed to assess the dimensions of Creative Engagement, Creative Cognitive Style, Spontaneity, Tolerance, and Fantasy. This 20-item scale instructs participants to indicate their level of agreement with statements about typical attitudes, characteristics, and behaviors (i.e., "I enjoy creating new things," "I am flexible in my thinking," and "I often fantasize") using a 7-point Likert-type scale ranging from "Strongly disagree" to "Strongly agree." Five subscale scores and one overall score are provided, with higher scores indicating higher levels of creativity. The overall score can range from 20 to 140, while the subscale scores can range from 4 to 28. Only the five subscales were used in the analyses. Cronbach's alphas are found in Table 1.

Social Coping Questionnaire (SCQ). This revised

Table 2: Social Coping Exploratory Factor Analysis Results

Questionnaire Item		Rotated Factor Loadings
Denying Giftedness		
SCQ11	People think that I am gifted, but they are mistaken.	.82
SCQ34	I don't think that I am gifted.	.79
SCQ23	I am not gifted; I am just lucky in school.	.60
SCQ27	As I get older and academic work gets more difficult, people will stop seeing me as gifted.	.56
SCQ31	There are many people who are more gifted than I am.	.46
Resisting Popularity		
SCQ2	I don't worry about whether or not I am popular.	.85
SCQ16	It doesn't matter what other people think about me.	.67
SCQ9	Being popular is not important in the long run.	.63
SCQ15	I try to act very much like other students act. (Reverse-coded)	.44
SCQ22	I try to look very similar to other students. (Reverse-coded)	.38
Activity Level		
SCQ13	I spend quite a bit of time on extracurricular activities.	.96
SCQ6	I find friends who have interests similar to mine by getting involved in extracurricular activities.	.71
SCQ32	I keep myself quite busy most of the time.	.53
SCQ17	Because of all my activities, I don't have time to worry about my popularity.	.46
Using Humor		
SCQ21	I tell a lot of jokes in school.	.83
SCQ4	People think of me as a "class clown."	.73
SCQ14	I'm good at making people laugh.	.60
SCQ28	Most people see me as quite serious. (Reverse-coded)	.49
Peer Acceptance		
SCQ26	Being gifted does not hurt my popularity.	.72
SCQ3	I would fit in better at school if I were not gifted. (Reverse-coded)	.63
SCQ10	Other students do not like me any less because I am gifted.	.61
SCQ19	If I were not gifted, other kids in my school would not like me any more or less than they do now.	.61
Helping Others		
SCQ5	I explain course material to other students when they don't understand it.	.86
SCQ20	I try to use what I know to help other students.	.76
SCQ12	People come to me for help with their homework.	.61

*Extraction method: Maximum Likelihood; Rotation method: Promax (oblique)

**Kaiser-Meyer-Olkin statistic = .74; Maximum Likelihood $\chi^2 = 438.86$, $p < .001$; Factor correlations $r = -.21$ to $.40$

***Factor 1 eigenvalue explains 16.1% variance; Factor 2 = 10.98%; Factor 3 = 9.77%; Factor 4 = 8.94%; Factor 5 = 7.42%; Factor 6 = 5.87%

version (Swiatek, 2001) is a self-report measure of different coping strategies that individuals might use to deal with the social stigma associated with giftedness. The SCQ is a 34-item non-timed instrument that instructs participants to report the extent to which a statement is true for them (e.g., "I spend quite a bit of time on extracurricular activities" and "I tell a lot of jokes in school") using a 7-point Likert-type scale ranging from "Strongly false" to "Strongly true." Seven subscale scores for (1) denial of giftedness, (2) using humor, (3) maintaining a high

activity level, (4) denying a negative impact of giftedness on peer acceptance, (5) conformity, (6) helping others, and (7) minimizing one's focus on popularity, as well as one overall score, can be calculated from the responses, with higher scores indicating greater use of the strategy. Item responses are averaged, so scores can range from 1 to 7 depending on the subscale. However, reliability analysis for the original seven social coping subscales for this sample yielded lower than desirable Cronbach's alphas, ranging from .50 to .77 (with three of the seven subscales

falling below .7). Therefore, this study developed new subscales for this instrument (see the Results section).

Data Analysis

Due to the unacceptably low Cronbach's alphas derived from the previous SCQ subscales of denial of giftedness, using humor, maintaining a high activity level, denying a negative impact of giftedness on peer acceptance, conformity, helping others, and minimizing one's focus on popularity (Swiatek, 2001), in the first stage of analyses an exploratory factor analysis was conducted to determine the factor structure for this group of honors college students. All items were subjected to an exploratory factor analysis using the Maximum Likelihood extraction method with a Promax (oblique) rotation. Six subscales were created based on this EFA, with five factors retaining their original names, one given an adjusted name to reflect a slightly different construct, and one original subscale dropped completely.

In the next stage of analysis, Ordinary Least Squares regression was used to create six separate models, with each of the social coping strategies as the outcome variable. The predictor variables were entered into the model in four blocks as a way to estimate the unique effect of each block. The demographic variables were first introduced as the first step independent variables in the model: gender (dummy-coded), first-generation status (dummy-coded), and amount of previous gifted program exposure. In the second step, the personality trait variables of Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness/Intellect were added. In the third step, the perfectionism variables of Self-Oriented Perfectionism, Other-Oriented Perfectionism, and Socially Prescribed Perfectionism were added. In the fourth step of the modelling process, the five creativity variables of Creative Engagement, Creative Cognitive Style, Spontaneity, Tolerance, and Fantasy were added.

Results

Exploratory Factor Analysis

The factor structure for the 34-item SCQ was examined, after it was determined that the published subscales (Swiatek, 2001) did not meet generally accepted standards for reliability. The Kaiser-Meyer-Olkin statistic for the 34-item scale was .739, indicating that the factorability of the items was "middling" (Kaiser, 1974, p. 35). Maximum Likelihood Estimation was the chosen extraction method. A Promax rotation was selected, choosing an oblique rather than orthogonal rotation because some of the factors appeared to be moderately correlated ($r = -.249$ to $.419$). A seven-factor solution was used, in order to explore whether the solution would conceptually align with the originally derived subscales.

Most of the constructs were similar, although one subscale was uninterpretable and only had two items with loadings above 0.40. A cut-off factor loading of 0.40 was used to determine whether items were considered to be associated with a factor (Kline, 1994). All but seven items met the cut-off criteria for at least one factor, and these non-loading items were excluded from further consideration in the subscales. Once these non-loading and uninterpretable items were dropped and a six-factor solution was used, this solution was interpretable and supported by examination of scree plots and using the criteria of eigenvalues greater than one.

The six factors, after rotation, accounted for 59% of the variance. Pattern matrix factor loadings can be found in Table 2. Based on the results of the exploratory factor analysis, the factors were interpreted as follows: Factor 1 – Denying Giftedness; Factor 2 – Resisting Popularity; Factor 3 – Activity Level; Factor 4 – Using Humor; Factor 5 – Peer Acceptance; and Factor 6 – Helping Others. The internal consistency for each new subscale was also examined, and Cronbach's alphas can be found in Table 3. These new alphas improved substantially over those associated with the original subscales (McMillan & Schumacher, 2001).

OLS Regression Models

The overall findings from all six models suggest that certain personality traits, aspects of perfectionism, creativity, and demographics affected students' use of social coping strategies (Tables 4 and 5). The predictor variables accounted for 4.6% to 35.3% of the total variance on social coping subscale scores (with significance levels for all total R^2 values at $p < .001$; see Table 4). The demographics included in the first block significantly contributed as change in variance (as ΔR^2) to the models predicting Denying Giftedness, Activity Level, Using Humor, and Helping Others. The personality traits in the second block significantly contributed to predicting all strategies but Resisting Popularity. The perfectionism subscales in the third block significantly contributed to predicting the strategies of Resisting Popularity, Activity Level, Peer Acceptance, and Helping Others. Finally, the creativity components in the fourth block significantly contributed to predicting the strategies of Using Humor and Helping Others. Personality traits contributed the largest proportion of variance for all models but the one predicting Resisting Popularity (for which perfectionism contributed the largest proportion).

The patterns of significant predictors differed for each of the coping strategies (Table 5). Generally, this suggests that honors students have developed a variety of strategies to deal with the social stress that arises from the stigma of giftedness, which they may be experiencing at fluctuating levels. In the model including Denying Giftedness as the outcome variable, Extraversion, Conscientiousness,

Table 3: Cronbach's Alphas, Means, and Standard Deviations for the Revised Social Coping Subscales

	Number of Items	Cronbach's α	Mean	SD
Denying Giftedness	5	.79	4.06	1.18
Resisting Popularity	5	.74	4.58	1.19
Activity Level	4	.76	4.85	1.31
Using Humor	4	.75	3.77	1.25
Peer Acceptance	4	.73	5.24	1.17
Helping Others	3	.77	5.52	1.04

Openness/Intellect, and previous gifted program exposure were significant negative predictors, suggesting that the higher one is on each of these traits, the less likely they are to engage in that coping strategy. Conversely, Neuroticism, Socially Prescribed Perfectionism, and Gender were significant positive predictors, meaning that those higher in neuroticism and socially prescribed perfectionism, as well as females were more likely to deny their giftedness. The model including Resisting Popularity as the outcome variable suggested that there were negative relationships for Self-Oriented Perfectionism and Openness/Intellect, but a positive association for Creative Engagement. For the Activity Level model, Extraversion, Agreeableness, Conscientiousness, Socially Prescribed Perfectionism, and Creative Engagement were all positively associated with this strategy.

The model including Using Humor as the outcome variable had a mix of positive and negative predictors. Previous Gifted Program Exposure, Extraversion, and Spontaneity were significant and positive predictors of this strategy; males were also more likely to use humor as a coping strategy. Conscientiousness was a negative predictor of Using Humor, with those higher in Conscientiousness being less likely to use this coping strategy. When Peer Acceptance was the outcome variable, Self-Oriented Perfectionism was negatively associated with feelings of being accepted by one's peers, while Neuroticism, Openness/Intellect, and Socially Prescribed Perfectionism were positively associated with this strategy. Finally, there were several positive predictors within the

Helping Others model, with Extraversion, Agreeableness, Socially Prescribed Perfectionism, Creative Cognitive Style, and Tolerance all showing significant and positive associations.

Discussion

Use of Social Coping Strategies

One central finding from this study suggests that the experience of high achieving individuals in higher education seems to be rather different from those experiences of younger students. The new factor structure that arises from this young adult population suggests that honors college students are experiencing, and therefore responding to, social stressors differently than students in middle school or high school. This could be due to age alone, but more likely is a combination of age as well as differences in environment. Conformity was no longer a coping strategy, and the originally named focus on popularity was shifted to resisting popularity to accommodate a slightly different grouping of items (some of which were reverse-coded). This distinction makes sense because these students are not only at a different stage from a developmental perspective (Berk, 2009), but they are in a new setting as well. They are generally more independent as college students, often no longer living full-time with parents/guardians. They have more control over many of their social interactions, and because they

Table 4: Summary Statistics for Ordinary Least Squares Regression Models

	Total R^2 : Full Model	ΔR^2 Block 1: Demographics	ΔR^2 Block 2: Personality	ΔR^2 Block 3: Perfectionism	ΔR^2 Block 4: Creativity
Denying Giftedness	.19***	.03**	.15***	.01	.00
Resisting Popularity	.05**	.00	.01	.02*	.02
Activity Level	.35***	.04**	.28***	.02**	.01
Using Humor	.35***	.04**	.29***	.00	.03**
Peer Acceptance	.16***	.000	.10***	.06***	.00
Helping Others	.21***	.02*	.13***	.02**	.04***

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 5: Ordinary Least squares Regression Coefficients for Social Coping Subscales (Block 4)

	Denying Giftedness		Resisting Popularity		Activity Level		Using Humor		Peer Acceptance		Helping Others	
	Coeff. β	Sig.	Coeff. β	Sig.	Coeff. β	Sig.	Coeff. β	Sig.	Coeff. β	Sig.	Coeff. β	Sig.
Gender	0.13	*	0.08		0.08		-0.18	***	-0.09		0.02	
First-generation status	0.02		0.06		-0.06		0.002		0.03		-0.05	
Previous gifted program exposure	-0.10	*	-0.06		-0.06		0.12	**	0.01		0.09	
Extraversion	-0.11	*	0.02		0.23	***	0.44	***	-0.11		0.23	***
Agreeableness	-0.02		-0.09		0.27	***	0.09		-0.08		0.21	***
Conscientiousness	-0.14	*	0.09		0.29	***	-0.14	*	-0.02		0.01	
Neuroticism	0.16	**	-0.10		-0.01		-0.02		0.20	**	0.08	
Openness	-0.23	**	-0.23	**	0.01		-0.07		0.18	*	0.04	
Self-oriented perfectionism	-0.11		-0.16	*	0.03		-0.03		-0.14	*	0.06	
Other-oriented perfectionism	0.02		-0.10		0.07		-0.09		0.02		0.03	
Socially prescribed perfectionism	0.12	*	0.07		0.13	*	0.04		0.28	***	0.13	*
Creative engagement	0.03		0.17	*	0.14	*	0.09		-0.04		-0.07	
Creative cognitive style	-0.09		0.09		0.01		0.05		-0.02		0.18	**
Spontaneity	0.07		-0.02		0.07		0.18	**	0.03		-0.07	
Tolerance	0.11		0.11		0.06		-0.08		-0.03		0.13	*
Fantasy	0.01		-0.02		0.01		0.06		-0.10		-0.11	

* $p < .05$; ** $p < .01$; *** $p < .001$

are taking part in honors courses and have the option of living in an honors-only residence hall, they may feel less of a social stigma related to giftedness overall (Coleman & Cross, 1988) as well as more support from their intellectually similar peers (Perrone, et al., 2010).

The most frequently used strategies of honors college students were Helping Others, Peer Acceptance, and Activity Level, which suggests a more proactive approach to social stress and is similar to previous studies (using slightly different factors) that determined Social Interaction, Helping Others, and Activity Level as the most frequent strategies (Swiatek, 2001; Swiatek & Cross, 2007; Swiatek & Dorr, 1998). In general, assisting others with their coursework and getting involved in extracurricular activities and organizations will have positive outcomes not only for the students themselves but for others as well (Mayhew, Rockenbach, et al., 2016; Pascarella & Terenzini, 2005). The least frequently used strategies in this young adult population, Denying Giftedness and Using Humor, might be useful for students as they navigate the cliques and bullying of middle and high school, as was the case with the original scale and sample (Swiatek, 1995), but their prevalence seems to lessen in a higher education setting. This may also be why the Conformity subscale used in previous research with younger populations was not a stable factor. In a place where good grades and intelligence are more highly valued, students might be less afraid to show this aspect of themselves, or perhaps they have matured in terms of their self-confidence. They may also be able to more actively avoid others who still enforce the social stigma of giftedness, therefore lessening the need to engage in such strategies.

Predictors of Social Coping Strategy Use

While the different factor structure indicates some differences within the experiences of honors college students, there are some similarities between the findings from this study and previous research with younger populations. For instance, Swiatek and Cross (2007) found that males were more likely to use humor, while females were more likely to deny giftedness. This association was also true for the predictive models in this study. Furthermore, extraversion has been linked to using humor and socially based strategies (Swiatek & Cross, 2007). This finding was replicated here, with more extraverted individuals being more likely to engage in Using Humor, Activity Levels, and Helping Others. More extraverted individuals were also less likely to deny their giftedness.

In addition to extraversion, other personality traits were identified as closely related to many of the coping strategies exhibited by these gifted students. Students higher on Agreeableness were more likely to be higher on Activity Level and Helping Others. This finding

makes sense from the context of Agreeableness and the desire for positive social interactions (Nezlek et al., 2011). Conscientious individuals were less likely to deny their giftedness and use humor, but more likely to focus on activity level. These students have a focus on accuracy and honesty, which may be why they do not want to deny their intellectual abilities but instead concentrate on being true to themselves through enjoyable structured activities. Those students higher on Neuroticism were more likely to deny giftedness and to concentrate on peer acceptance, which could be a reflection of self-doubt and negativity. This association is a concern for these students, as this personality trait is generally linked to less positive psychological outcomes if found in excess (Roberts et al., 2007), particularly in the face of stress (Bolger & Zuckerman, 1995). Finally, those higher in Openness/Intellect were less likely to deny their giftedness and resist popularity, and more likely to focus on peer acceptance, which is a generally encouraging finding. These individuals seem to have embraced their abilities and are not actively denouncing their intellect or overly concerned with peer status systems, while still seeming to recognize the importance of positive interactions with others. This kind of realistic self-acceptance can contribute to psychological well-being (Garcia et al., 2014).


In looking at findings related to the various types of perfectionism and related coping strategies, the patterns seem to suggest that students who struggle with perfectionism may need some additional assistance in their approach to dealing with social stress. Those students identified as being higher in Self-Oriented Perfectionism were less likely to focus on Peer Acceptance. Certainly, it is encouraging that these students were not overly concerned with fitting in with others. However, these individuals were also less likely to resist popularity, which could mean that they still battle with social perceptions of their giftedness and see popularity as an aspect of "perfection" that they are seeking for themselves. Furthermore, it is not surprising that those students who are higher in Socially Prescribed Perfectionism, and therefore feel that others expect them to be perfect, are also focused on pleasing others through their social coping strategies. These students appear to be more likely to engage in helping others and participating in extracurricular activities, and also more likely to deny their giftedness and focus on peer acceptance. These students, who are already feeling social pressure to perform, might be at an increased risk for stress-induced burnout (Blaas, 2014), which can have a negative impact not only on their social interactions but on their academic performance as well.

There is previous support for the connection between humor and creativity in gifted students (Davis, 2004; Shade, 1991), as well as humor, intelligence, and creativity in general (Christensen et al., 2018; Kellner

& Benedek, 2017), and use of this coping strategy was found for the current sample. Specifically, Use of Humor as a social coping strategy was predicted by the creativity subscale of Spontaneity, which is comparable to "on-the-spot" thinking skills needed for improvisation and humor production (Ruch & Heintz, 2018). Other components of creativity (Creative Engagement, Cognitive Style, and Tolerance) were also predictive of Activity Level and Helping Others, which are other somewhat expected relationships. Some creative endeavors are formally sponsored and/or group activities such as performing arts like music and drama, so the social interactions involved in these activities would be a good fit for gifted students who are incorporating these social coping strategies. Finally, the connection between creative engagement and resisting popularity also makes sense, as research suggests that individuals higher on creativity can also be more independent and willing to go against the crowd (Batey & Furnham, 2006).

One final interesting finding of note was that previous gifted program exposure was a positive predictor of Using Humor and a negative predictor of Denying Giftedness. Previous participation in gifted programming suggests that, since these students have already been identified as gifted during prior educational experiences, they may be more comfortable with this status and subsequently are more comfortable in showing their intellect. Given their prior gifted program experience, they might be applying a previously developed strategy into the "new" setting of higher education. In addition to any academic and intellectual benefits that might arise from receiving gifted programming exposure in elementary, middle, and/or high school (Reis & Renzulli, 2010), these students may also have developed a positive coping strategy and then applied this humor approach once they reached college. Furthermore, the decreased likelihood of denying giftedness is not surprising given their previous educational experiences. The majority of study participants did report receiving some kind of gifted programming during their K-12 experience, although the amount and types differed. But if a student has been formally identified as gifted and participated in a greater amount of gifted programming, it makes sense that they are more likely to have accepted this label and perhaps even incorporated it into their sense of identity, compared with students who had less exposure to previous gifted programming.

Implications for Practice

Together these findings can be useful in the development of programming and interventions for helping honors college students deal with social stressors. Staff and administrators can encourage students to engage in creative outlets, and provide low-risk and non-evaluative instruction in areas such as music, dance, fine arts, improv, creative writing or journaling, or even graphic design, *SENG Journal* Vol. 4, No. 1, 20-36 

knitting/crochet, model building, and makeup artistry. Providing space and resources for students to engage in these various creative activities could provide support and encourage positive social interaction as well. For students who are more introverted and therefore less likely to engage in the more positive social coping strategies such as activity level and helping others, advisors could recommend participation in high-impact practices such as research with a faculty member or engagement in culminating projects in their academic discipline, which involve individual or one-on-one social interaction and may be less intimidating but are still associated with many positive outcomes (Kilgo et al., 2015; Kuh, 2008). Many honors colleges require a culminating senior thesis (Digby, 2005), but this could even be expanded into a series of summative cross-disciplinary or specialized projects to be completed at the end of each year rather than waiting until senior year. Another introvert-friendly program might be the creation of a "reading-for-pleasure" book club that would be a way for those less outgoing students to still participate in some structured social interaction while also engaging in a solitary activity. The non-evaluative element of this would also be ideal for perfectionists, as it would alleviate concern about any graded component and allow them to take part in reading for the enjoyment of the activity. For those students higher in neuroticism or perfectionism (or both), providing workshops on time and task management might help them deal with stress (while incorporating socialization during the workshop itself). The workshops could also emphasize the need for social support as part of daily or weekly planning, which could empower them with a sense of control and therefore alleviate overall stress as well. It may also be important to consider potential gender differences when making recommendations. Noldon and Sedlacek (1998) found that women in honors programs were more likely to express interests in community service and creative activities, while men were more interested in intramural sport participation as ways to develop connections with the campus community.

Limitations & Future Research

While there are several strengths of this study, some limitations should also be noted. One limitation involves the use of self-reported measures. Although this type of research has the advantage of increased sample size and ease of online data collection, responses to the measures may not always be completely objective. However, most studies looking at self-reports of students in higher education suggest that self-reports and actual abilities are positively related (Anaya, 1999; Hayek et al., 2002; Pike, 1995), and social desirability bias does not play a substantial role in their responses for surveys of basic cognitive and academic behaviors (Miller, 2012). Another potential issue with the existing instrument was that not all of the items directly address the motivation behind

the behaviors (such as humor and activity level) as way to cope with a giftedness stigma. Furthermore, the items only addressed existing strategies already identified in the literature, rather than discovering entirely new strategies. The lower response rate could be a potential source of bias in the sample, although previous research suggests that studies with lower response rates can still maintain adequate response representativeness (Fosnacht et al., 2017; Lambert & Miller, 2014).

Further research with more diverse and recent samples is needed. While representative of the honors college at this particular university, the sample was somewhat homogenous in terms of age and ethnicity and might not generalize to all high ability young adults. Furthermore, this research took place at a single institution, so research that includes high ability populations at other higher education institutions could also be beneficial. Another limitation involves the age of the data. Even before the COVID pandemic, research suggested an increase in anxiety and depression in college students (Lipson et al., 2019), and according to one recent survey, 95% of college students report negative mental health symptoms as a result of their experience during COVID-19 (Dennon, 2021). Given the general trends over the past decade, and the extreme disruption of the pandemic, it would be useful to replicate this study with newer and more diverse samples.

Additionally, for some of the models, there were relatively low standardized coefficients and percentages of explained variance, which suggests that there are many other factors not included in the analyses influencing the variables of interest. Qualitative approaches to the study of gifted student stress and coping may offer more nuanced insight into the social experiences of honors college students. In so doing, researchers may further understand the differences between middle/high school and college stress responses within this population. Future research might also include other related constructs, such as locus of control, self-esteem, or temperament in

order to determine how these constructs relate to coping strategies. The sample is also considered high ability, rather than gifted, due to the admission requirements of the honors college, so there are some restrictions when comparing to previous research. Nevertheless, previous experiences in K-12 gifted programming for the majority of participants suggest there is quite a bit of overlap in these categorizations. Given these conceptual and methodological caveats, the results should be interpreted with caution.

Conclusions

This study has several important implications for policy and practice in the administration of honors colleges. One notable finding is the need for a new factor structure when using the Social Coping Questionnaire with college students. The different factor structure indicates that the higher education experience differs substantially from the middle and high school experience, particularly regarding independence and control over social interactions. Consequently, honors college students seem to be experiencing the social stigma of giftedness in different ways than previously found in K-12 populations. Identifying these coping strategies and noting which ones are used by various types of students (as was done with the predictive models in this study), can help in advising and counseling them (Rimm, 2002). For honors college students facing the pressures of an academically rigorous environment, knowledge of coping skills can contribute to their well-being. These findings, in turn, may assist educators in designing targeted interventions for students to develop positive social coping strategies and creating optimal environments for honors college students. Acknowledging how psychological traits relate to social coping for these high ability students paints a better picture of their educational and personal experience and provides a context to better serve this population in the future.

References

- Amabile, T.M. (1996). *Creativity in context*. Westview.
- Anaya, G. (1999). College impact on student learning: Comparing the use of self-reported gains, standardized test scores, and college grades. *Research in Higher Education*, 40(5), 499-526. <https://doi.org/10.1023/A:1018744326915>
- Baer, J. (2012). Domain specificity and the limits of creativity theory. *The Journal of Creative Behavior*, 46(1), 16-29. <https://doi.org/10.1002/jocb.002>
- Batey, M., & Furnham, A. (2006). Creativity, intelligence, and personality: A critical review of the scattered literature. *Genetic, Social, and General Psychology Monographs*, 132(4), 355-429. <https://doi.org/10.3200/MONO.132.4.355-430>
- Benet-Martínez, V., & John, O. P. (1998). Los Cinco Grandes across cultures and ethnic groups: Multitrait-multimethod analyses of the Big Five in Spanish and English. *Journal of Personality and Social Psychology*, 75(3), 729-750. <https://doi.org/10.1037/0022-3514.75.3.729>
- Berk, L. E. (2009). *Development through the lifespan* (5th ed.). Allyn and Bacon.
- Blaas, S. (2014). The relationship between social-emotional difficulties and underachievement of gifted students. *Journal of Psychologists and Counsellors in Schools*, 24(2), 243-255. <https://doi.org/10.1017/jgc.2014.1>

- Blatt, S. J. (1995). The destructiveness of perfectionism: Implications for the treatment of depression. *American Psychologist*, 50(12), 1003-1020. <https://doi.org/10.1037/0003-066X.50.12.1003>
- Bolger, N., & Zuckerman, A. (1995). A framework for studying personality in the stress process. *Journal of Personality and Social Psychology*, 69(5), 890-902. <https://doi.org/10.1037/0022-3514.69.5.890>
- Brown, R.T. (1989). Creativity: What are we to measure? In J.A. Glover, R. R. Ronning, & C.R. Reynolds (Eds.), *Handbook of creativity* (pp. 3-32). Plenum Press.
- Carman, C. A. (2013). Comparing apples and oranges: Fifteen years of definitions of giftedness in research. *Journal of Advanced Academics*, 24(1), 52-70. <https://doi.org/10.1177/1932202X12472602>
- Chan, D. W. (2003). Dimensions of emotional intelligence and their relationships with social coping among gifted adolescents in Hong Kong. *Journal of Youth and Adolescence*, 32(6), 409-418. <https://doi.org/10.1023/A:1025982217398>
- Chan, D. W. (2004). Social coping and psychological distress among Chinese gifted students in Hong Kong. *Gifted Child Quarterly*, 48(1), 30-41. <https://doi.org/10.1177/001698620404800104>
- Chan, D. W. (2005). The structure of social coping among Chinese gifted children and youths in Hong Kong. *Journal for the Education of the Gifted*, 29(1), 8-29. <https://doi.org/10.1177/016235320502900102>
- Chan, D. W. (2006). Emotional intelligence, social coping, and psychological distress among Chinese gifted students in Hong Kong. *High Ability Studies*, 16(2), 163-178. <https://doi.org/10.1080/13598130600617589>
- Chang, E. C. (2000). Perfectionism as a predictor of positive and negative psychological outcomes: Examining a mediation model in younger and older adults. *Journal of Counseling Psychology*, 47(1), 18-26. <https://doi.org/10.1037//0022-0167.47.1.18>
- Christensen, A. P., Silvia, P. J., Nusbaum, E. C., & Beaty, R. E. (2018). Clever people: Intelligence and humor production ability. *Psychology of Aesthetics, Creativity, and the Arts*, 12(2), 136-143. <https://doi.org/10.1037/aca0000109>
- Cognard-Black, A. J., & Savage, H. (2016). Variability and similarity in honors curricula across institution size and type. *Journal of the National Collegiate Honors Council* – Online Archive. Paper 521. <https://digitalcommons.unl.edu/nchcjournal/521/>
- Cognard-Black, A. J., Smith, P. J., & Dove, A. L. (2017). Institutional variability in honors admissions standards, program support structures, and student characteristics, persistence, and program completion. *Journal of the National Collegiate Honors Council* – Online Archive. Paper 598. <https://digitalcommons.unl.edu/nchcjournal/598/>
- Cognard-Black, A. J., & Spisak, A. L. (2019). Creating a profile of an honors Student: A comparison of honors and non-honors students at public research universities in the United States. *Journal of the National Collegiate Honors Council* – Online Archive. Paper 623. <https://digitalcommons.unl.edu/nchcjournal/623/>
- Coleman, L. J. (2012). Lived experience, mixed messages, and stigma. In T. L. Cross & J. R. Cross (Eds.), *Handbook for counselors serving students with gifts and talents* (pp. 371-392). Prufrock Press.
- Coleman, L. J., & Cross, T. L. (1988). Is being gifted a social handicap? *Journal for the Education of the Gifted*, 11(4), 41-56. <https://doi.org/10.1177/016235328801100406>
- Coleman, L. J., & Cross, T. L. (2005). *Being gifted in school: An introduction to development, guidance, and teaching* (2nd ed.). Prufrock Press.
- Connor-Smith, J. K., & Flachsbar, C. (2007). Relations between personality and coping: A meta-analysis. *Journal of Personality and Social Psychology*, 93(6), 1080-1107. <https://doi.org/10.1037/0022-3514.93.6.1080>
- Costa, P. T., Jr., & McCrae, R. R. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of Personality and Social Psychology*, 52(1), 81-90. <https://doi.org/10.1037/0022-3514.52.1.81>
- Cross, J. R., O'Reilly, C., Kim, M., Mammadov, S., & Cross, T. L. (2015). Social coping and self-concept among young gifted students in Ireland and the United States: A cross-cultural study. *High Ability Studies*, 26(1), 39-61. <https://doi.org/10.1080/13598139.2015.1031881>
- Cross, T. L., Coleman, L. J., & Stewart, R. A. (1993). The social cognition of gifted adolescents: An exploration of the stigma of giftedness paradigm. *Roeper Review*, 16(1), 37-40. <https://doi.org/10.1080/02783199309553532>
- Cross, T. L., Coleman, L. J., & Terhaar-Yonkers, M. (2014). The social cognition of gifted adolescents in schools: Managing the stigma of giftedness. *Journal for the Education of the Gifted*, 37(1), 30-39. <https://doi.org/10.1177/0162353214521492>
- Cross, T. L., & Swiatek, M. A. (2009). Social coping among academically gifted adolescents in a residential setting: A longitudinal study. *Gifted Child Quarterly*, 53(1), 25-33. <https://doi.org/10.1177/0016986208326554>
- Csikszentmihalyi, M. (1996). *Creativity: Flow and the psychology of discovery and invention*. Harper Collins.
- Davis, G. (2004). *Creativity is forever* (5th ed.). Kendall Hunt.
- Davis, S. F., & Palladino, J. J. (2000). *Psychology* (3rd ed.). Prentice Hall.
- Dean, S. R. (2019). Understanding the development of honors students' connections with faculty. *Journal of the National Collegiate Honors Council*, 20(1), 107-121
- Dennon, A. (2021, April 11). Over 9 in 10 college students report mental health impacts from COVID-19. *Best Colleges*. Available online: <https://www.bestcolleges.com/research/college-mental-health-impacts-from-covid-19/>
- Digby, J. (2005). *Peterson's honors programs: The official guide of the National Collegiate Honors Council* (4th ed.). Peterson's.
- Eddles-Hirsch, K., Vialle, W., McCormick, J., & Rogers, K. (2012). Insiders or outsiders: The role of social context in the peer relations of gifted students. *Roeper Review*, 34(1), 53-62. <https://doi.org/10.1080/02783193.2012.627554>

- Fischer, D. (1996, September 16). The new honors programs. *U.S. News and World Report*, 121, 108-110. <https://eric.ed.gov/?id=EJ541271>
- Flett, G. L., & Hewitt, P. L. (2002). Perfectionism: Theory, research, and treatment. American Psychological Association.
- Ford, M. A. (1989). Students' perceptions of affective issues impacting the social emotional development and school performance of gifted/talented youngsters. *Roeper Review*, 11(3), 131-134. <https://doi.org/10.1080/02783198909553188>
- Fosnacht, K., Sarraf, S., Howe, E., & Peck, L. (2017). How important are high response rates for college surveys? *The Review of Higher Education*, 40(2), 245-265. <https://doi.org/10.1353/rhe.2017.0003>
- Foust, R. C., Rudasill, K. M., & Callahan, C. M. (2006). An investigation into the gender and age differences in the social coping of academically advanced students. *Journal of Advanced Academics*, 18(1), 60-80. <https://doi.org/10.4219/jaa-2006-346>
- Frost, D. M. (2011). Social stigma and its consequences for the socially stigmatized. *Social and Personality Psychology Compass*, 5(11), 824-839. <https://doi.org/10.1111/j.1751-9004.2011.00394.x>
- Furtwengler, S. R. (2015). Effects of participation in a post-secondary honors program with covariate adjustment using propensity score. *Journal of Advanced Academics*, 26(4), 274-293. <https://doi.org/10.1177/1932202X15603365>
- Garcia, D., Al Nima, A., & Kjell, O. N. E. (2014). The affective profiles, psychological well-being, and harmony: Environmental mastery and self-acceptance predict the sense of a harmonious life. *PeerJ*, 2(259), 1-21. <https://doi.org/10.7717/peerj.259>
- Gough, H.G. (1979). A creative personality scale for the Adjective Check List. *Journal of Personality and Social Psychology*, 37(8), 1398-1405. <https://doi.org/10.1037/0022-3514.37.8.1398>
- Greenspon, T. S. (2000). "Healthy perfectionism" is an oxymoron! *The Journal of Secondary Gifted Education*, 11(4), 197-208. <https://doi.org/10.4219/jsge-2000-631>
- Guignard, J. H., Kermarrec, S., Tordjman, S. (2016). Relationships between intelligence and creativity in gifted and non-gifted children. *Learning and Individual Differences*, 52, 209-215. <https://doi.org/10.1016/j.lindif.2015.07.006>
- Hatzenbuehler, M. L., Phelan, J. C., & Link, B. G. (2013). Stigma as a fundamental cause of population health inequalities. *American Journal of Public Health*, 103(5), 813-821. <https://ajph.aphapublications.org/doi/10.2105/AJPH.2012.301069>
- Hayek, J. C., Carini, R. M., O'Day, P. T., & Kuh, G. D. (2002). Triumph or tragedy: Comparing student engagement levels of members of Greek-letter organizations and other students. *Journal of College Student Development*, 43, 643-663. <https://muse.jhu.edu/journal/238>
- Henfield, M. S., Woo, H., Lin, Y.-C., & Rausch, M. A. (2014). Too smart to fail: Perceptions of Asian American students' experiences in a collegiate honors program. *Gifted Child Quarterly*, 58(2), 137-148. <https://doi.org/10.1177/0016986214521659>
- Hewitt, P. L. & Flett, G. L. (1991). Perfectionism in the self and social contexts: Conceptualization, assessment, and association with psychopathology. *Journal of Personality and Social Psychology*, 60(3), 456-470. <https://doi.org/10.1037/0022-3514.60.3.456>
- John, O. P., Donahue, E. M., & Kentle, R. L. (1991). *The "Big Five" Inventory: Versions 4a and 54*. University of California, Berkeley, Institute of Personality and Social Research. <https://doi.org/10.1037/t07550-000>
- John, O. P., & Srivastava, S. (1999). The Big Five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (pp. 102-138). Guilford Press.
- Johnson, M., Walther, C., & Medley, K. J. (2018). Perceptions of advisors who work with high-achieving students. *Journal of the National Collegiate Honors Council --Online Archive*, 571, 105-124. <https://digitalcommons.unl.edu/nhcjournal/571/>
- Jung, J. Y., McCormick, J., & Gross, M. U. M. (2012). The forced choice dilemma: A model incorporating idiocentric/allocentric cultural orientation. *Gifted Child Quarterly*, 56(1), 15-24. <https://doi.org/10.1177/0016986211429169>
- Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika*, 39(1), 31-36. <https://doi.org/10.1007/BF02291575>
- Kellner, R., & Benedek, M. (2017). The role of creative potential and intelligence for humor production. *Psychology of Aesthetics, Creativity, and the Arts*, 11(1), 52-58. <https://doi.org/10.1037/aca0000065>
- Kelly, K. E. (2004). A brief measure of creativity among college students. *College Student Journal*, 38(4), 594-596.
- Kilgo, C. A., Sheets, J. K. E., & Pascarella, E. T. (2015). The link between high-impact practices and student learning: Some longitudinal evidence. *Higher Education*, 69(4), 509-525. <https://doi.org/10.1007/s10734-014-9788-z>
- Kline, P. (1994). *An easy guide to factor analysis*. Routledge.
- Kuh, G. D. (2008). High-impact educational practices: *What they are, who has access to them, and why they matter*. Association of American Colleges and Universities.
- Lambert, A. D., & Miller, A. L. (2014). Lower response rates on alumni surveys might not mean lower response representativeness. *Educational Research Quarterly*, 37(3), 40-53.
- Lee, S. Y., Olszewski-Kubilius, P., Thomson, D. (2012). The social competence of highly gifted math and science adolescents. *Asia Pacific Education Review*, 13(2), 185-197. <https://doi.org/10.1007/s12564-012-9209-x>
- Link, B. G., & Phelan, J. C. (2006). Stigma and its public health implications. *Lancet*, 367(9509), 5285-529. [https://doi.org/10.1016/S0140-6736\(06\)68184-1](https://doi.org/10.1016/S0140-6736(06)68184-1)
- Lipson, S. K., Lattie, E. G., & Eisenberg, D. (2019). Increased rates of mental health service utilization by US college students: 10-year population-level trends (2007-2017). *Psychiatric Services*, 70(1), 60-63. <https://doi.org/10.1176/appi.ps.201800332>
- Major, B., & O'Brien, L. T. (2005). The social psychology of stigma. *Annual Review of Psychology*, 56, 393-421. <https://doi.org/10.1146/annurev.psych.56.091103.070137>

- Mammadov, S., Hertzog, N. B., & Mun, R. U. (2018). An examination of self-determination within alumni of an early college entrance program. *Journal for the Education of the Gifted*, 41(3), 273-291. <https://doi.org/10.1177/0162353218781745>
- Manor-Bullock, R., Look, C., & Dixon, D. N. (1995). Is giftedness socially stigmatizing? The impact of high achievement on social interactions. *Journal for the Education of the Gifted*, 18(3), 319-338. <https://doi.org/10.1177/016235329501800307>
- Mayhew, M. J., Rockenbach, A. N., Bowman, N. A., Seifert, T. A., & Wolniak, G. C. (2016). *How college affects students, volume 3: 21st century evidence that higher education works*. Jossey-Bass.
- Mayhew, M. J., Selznick, B. S., Lo, M. A., & Vassallo, S. J. (2016). Take it personally: Incorporating personality traits as input covariates in college impact research. *Journal of College Student Development*, 57(7), 880-885. <https://doi.org/10.1353/csd.2016.0084>
- McMillan, J. H., & Schumacher, S. (2001). *Research in education: A conceptual introduction* (5th ed.). Longman.
- Miller, A. L. (2012). Investigating social desirability bias in student self-report surveys. *Educational Research Quarterly*, 36(1), 30-47.
- Miller, A. L. (2016). Connecting creativity and giftedness: Do high-ability populations have an advantage? In G. Moneta & J. Rogaten (Eds.), *Psychology of creativity: Cognitive, emotional, and social processes* (pp. 83-98). Nova Publications.
- Miller, A. L., & Dumford, A. D. (2018). Do high achieving students benefit from honors college participation? A look at student engagement for first-year students and seniors. *Journal for the Education of the Gifted*, 41(3), 217-241. <https://doi.org/10.1177/016235321878175>
- Miller, A. L., Silberstein, S. M., & BrckaLorenz, A. (2021). Teaching honors courses: Perceptions of engagement from the faculty perspective. *Journal of Advanced Academics*, 32(1), 3-27. <https://doi.org/10.1177/1932202X20938021>
- Miller, A. L. & Speirs Neumeister, K. L. (2012). Multiple variables for predicting creativity in high ability adults. *Advanced Development Journal*, 13, 84-102.
- Murdock, M. C., & Ganim, R. M. (1993). Creativity and humor: Integration and incongruity. *Journal of Creative Behavior*, 27(1), 57-70. <https://doi.org/10.1002/j.2162-6057.1993.tb01387.x>
- Nezlek, J. B., Derks, P. L., & Simanski, J. (2021). Relationships between everyday use of humor and daily experience. *HUMOR*, 34(1), 21-39. <https://doi.org/10.1515/humor-2020-0073>
- Nezlek, J. B., Schütz, A., Schröder-Abé, M., & Smith, C. V. (2011). A cross-cultural study of relationships between daily social interaction and the Five-Factor Model of personality. *Journal of Personality*, 79(4), 811-840. <https://doi.org/10.1111/j.1467-6494.2011.00706.x>
- Nicol, J. J., & Long, B. C. (2010). Creativity and perceived stress of female music therapists and hobbyists. *Creativity Research Journal*, 9(1), 1-10. https://doi.org/10.1207/s15326934crj0901_1
- Noldon, D., & Sedlacek, W. E. (1998). Gender differences in attitudes, skills, and behaviors among academically talented university freshmen. *Roeper Review*, 21(2), 106-1069. <https://doi.org/10.1080/02783199809553940>
- O'Brien, T. B., & DeLongis, A. (1996). The interactional context of problem-, emotion, and relationship-focused coping: the role of the big five personality factors. *Journal of Personality*, 64(4), 775-813. <https://doi.org/10.1111/j.1467-6494.1996.tb00944.x>
- Overholser, J. C. (1992). Sense of humor when coping with life stress. *Personality and Individual Differences*, 13(7), 799-804. [https://doi.org/10.1016/0191-8869\(92\)90053-R](https://doi.org/10.1016/0191-8869(92)90053-R)
- Parker, W. D. (1997). An empirical typology of perfectionism in academically talented children. *American Educational Research Journal*, 34(3), 545-562. <https://doi.org/10.3102/00028312034003545>
- Parker, W. D. (2002). Perfectionism and adjustment in gifted children. In P. L. Hewitt & G. L. Flett (Eds.), *Perfectionism: Theory, research, and treatment* (pp. 133-148). American Psychological Association.
- Parker, W. D. & Adkins, K. K. (1995). The incidence of perfectionism in honors and regular college students. *Journal of Secondary Gifted Education*, 7(1), 303-309. <https://doi.org/10.1177/1932202X9500700103>
- Pascarella, E. T. & Terenzini, P. T. (2005). *How college affects students: A third decade of research* (Vol. 2). Jossey-Bass.
- Perrone, K. M., Wright, S. L., Ksiazak, T. M., Crane, A. L., & Vannatter, A. (2010). Looking back on lessons learned: Gifted adults reflect on their experiences in advanced classes. *Roeper Review*, 32(2), 127-139. <https://doi.org/10.1080/02783191003587918>
- Pike, G. R. (1995). The relationship between self-reports of college experiences and achievement test scores. *Research in Higher Education*, 36(1), 1-21. <https://doi.org/10.1007/BF02207764>
- Plominski, A. P., & Burns, L. R. (2018). An investigation of student psychological wellbeing: Honors versus nonhonors undergraduate education. *Journal of Advanced Academics*, 29(1), 5-28. <https://doi.org/10.1177/1932202X17735358>
- Plucker, J.A. (1998). Beware of simple conclusions: The case for content generality of creativity. *Creativity Research Journal*, 11(2), 179-182. https://doi.org/10.1207/s15326934crj1102_8
- Reichert, N. L. (2007). The honors community: Furthering program goals by securing honors housing. *Honors in Practice – Online Archive*. Paper 38. <https://digitalcommons.unl.edu/nchchip/38/>
- Reis, S. M. & Renzulli, J. S. (2010). Is there still a need for gifted education? An examination of current research. *Learning and Individual Differences*, 20(4), 308-317. <https://doi.org/10.1016/j.lindif.2009.10.012>
- Rice, K. G., Leever, B. A., Christopher, J., & Porter, J. D. (2006). Perfectionism, stress, and social (dis)connection: A short-term study of hopelessness, depression, and academic adjustment among honors students. *Journal of Counseling Psychology*, 53(4), 524-534. <https://doi.org/10.1037/0022-0167.53.4.524>

- Rimm, S. (2002). Peer pressures and social acceptance of gifted students. In M. Neihart, S. M. Reis, N. M. Robinson, & S. M. Moon (Eds.), *The social and emotional development of gifted children: What do we know* (pp. 13-18). National Association for Gifted Children.
- Rinn, A. N. (2007). Effects of programmatic selectivity on the academic achievement, academic self-concepts, and aspirations of gifted college students. *Gifted Child Quarterly*, 51(3), 232-245. <https://doi.org/10.1177/0016986207302718>
- Rinn, A. N. (2008). Pre-college experiences and characteristics of gifted students. In L. Clark, & J. Zubizarreta (Eds.), *Inspiring exemplary teaching and learning: Perspectives on teaching academically talented college students* (pp. 9-17). National Collegiate Honors Council.
- Rinn, A. N., & Plucker, J. A. (2004). We recruit them, but then what? The educational and psychological experiences of academically talented undergraduates. *Gifted Child Quarterly*, 48(1), 54-67. <https://doi.org/10.1177/001698620404800106>
- Rinn, A. N., & Plucker, J. A. (2019). High-ability college students and undergraduate honors programs: A systematic review. *Journal for the Education of the Gifted*, 42(3), 187-215. <https://doi.org/10.1177/0162353219855678>
- Roberts, B. W., Kuncel, N. R., Shiner, R., Caspi, A., & Goldberg, L. R. (2007). The power of personality: The comparative validity of personality traits, socioeconomic status, and cognitive ability for predicting important life outcomes. *Perspectives on Psychological Science*, 2(4), 313-345. <https://doi.org/10.1111/j.1745-6916.2007.00047.x>
- Roberts, S. M., & Lovett, S. B. (1994). Examining "F" in gifted: Academically gifted adolescents' physiological and affective responses to scholastic failure. *Journal for the Education of the Gifted*, 17(3), 241-259. <https://doi.org/10.1177/016235329401700304>
- Ruch, W., & Heintz, S. (2018). Humor production and creativity: Overview and recommendations. In S. R. Luria, J. Baer, & J. C. Kaufman (Eds.), *Creativity and humor: Explorations in creativity research* (pp. 1-42). Academic Press.
- Rudasill, K. M., Foust, R. C., & Callahan, C. M. (2007). The social coping questionnaire: An examination of its structure with an American sample of gifted adolescents. *Journal for the Education of the Gifted*, 30(3), 353-371. <https://doi.org/10.1177/016235320703000304>
- Runco, M. A. (1987). The generality of creative performance in gifted and nongifted children. *Gifted Child Quarterly*, 31(3), 121-125. <https://doi.org/10.1177/001698628703100306>
- Runco, M.A., & Jaeger, G.J. (2012). The standard definition of creativity. *Creativity Research Journal*, 24(1), 92-96. <https://doi.org/10.1080/10400419.2012.650092>
- Runco, M.A., Plucker, J.A., & Lim, W. (2001). Development and psychometric integrity of a measure of ideational behavior. *Creativity Research Journal*, 13(3-4), 393-400. https://doi.org/10.1207/S15326934CRJ1334_16
- Schneider, M., Voracek, M., & Tran, U. S. (2018). "A joke a day keeps the doctor away?" Meta-analytical evidence of differential associations of habitual humor styles with mental health. *Scandinavian Journal of Psychology*, 59(3), 289-300. <https://doi.org/10.1111/sjop.12432>
- Schuler, P. A. (2000). Perfectionism in the gifted adolescent. *Journal of Secondary Gifted Education*, 11(4), 183-196. <https://doi.org/10.4219/jsge-2000-629>
- Schuman, S. (2006). *Beginning in honors: A handbook*. National Collegiate Honors Council – Monograph Series. Paper 7.
- Scott, R. I., Smith, P. J., & Cognard-Black, A. J. (2017). Demography of honors: The census of U.S. honors programs and colleges. *Journal of the National Collegiate Honors Council – Online Archive*. Paper 548. <https://digitalcommons.unl.edu/nhcjournal/548/>
- Sederberg, P. (2005). Characteristics of the contemporary Honors College: A descriptive analysis of a survey of NCHC member colleges. *Journal of the National Collegiate Honors Council – Online Archive*. Paper 180.
- Seifert, T. (2009). Honors programs. In B. Kerr (Ed.), *Encyclopedia of giftedness, creativity, and talent* (pp. 437-438). Sage.
- Seifert, T. A., Pascarella, E. T., Colangelo, N., & Assouline, S. G. (2007). The effects of honors program participation on experiences of good practices and learning outcomes. *Journal of College Student Development*, 48(1), 5-74. <https://doi.org/10.1353/csd.2007.0007>
- Shade, R. (1991). Verbal humor in gifted students and in students in the general population: A comparison of spontaneous mirth and comprehension. *Journal for the Education of the Gifted*, 14(2), 134-150. <https://doi.org/10.1177/016235329101400203>
- Shaunessy, E. & Suldo, S. M. (2010). Strategies used by intellectually gifted students to cope with stress during their participation in a high school International Baccalaureate program. *Gifted Child Quarterly*, 54(2), 127-137. <https://doi.org/10.1177/0016986209355977>
- Sherry, S. B., Hewitt, P. L., Flett, G., Lee-Baggley, D., Hall, P. (2007). Trait perfectionism and perfectionistic self-presentation in personality pathology. *Personality and Individual Differences*, 42(3), 477-490. <https://doi.org/10.1016/j.paid.2006.07.026>
- Sowa, C. J., & May, K. M. (1997). Expanding Lazarus and Folkman's paradigm to the social and emotional adjustment of gifted children and adolescents (SEAM). *Gifted Child Quarterly*, 41(2), 36-43. <https://doi.org/10.1177/001698629704100205>
- Speirs Neumeister, K. L. (2004). Factors influencing the development of perfectionism in gifted college students. *Gifted Child Quarterly*, 48(4), 259-274. <https://doi.org/10.1177/001698620404800402>
- Speirs Neumeister, K. L. (2017). Perfectionism in gifted students. In J. Stoeber (Ed.), *The psychology of perfectionism: Theory, research, applications* (pp. 134-154). Routledge.
- Stoeber, J., Otto, K., & Dalbert, C. (2009). Perfectionism and the big five: Conscientiousness predicts longitudinal increases in self-oriented perfectionism. *Personality and Individual Differences*, 47(4), 363-368. <https://doi.org/10.1016/j.paid.2009.04.004>


- Streznewski, M. K. (1999). *Gifted grownups: The mixed blessings of extraordinary potential*. John Wiley & Sons.
- Swiatek, M. A. (1995). An empirical investigation of the social coping strategies used by gifted adolescents. *Gifted Child Quarterly*, 39(3), 154-160. <https://doi.org/10.1177/001698629503900305>
- Swiatek, M. A. (2001). Social coping among gifted high school students and its relationship to self-concept. *Journal of Youth and Adolescence*, 30(1), 19-39. <https://doi.org/10.1023/A:1005268704144>
- Swiatek, M. A. (2002). Social coping among gifted elementary school students. *Journal for the Education of the Gifted*, 26(1), 65-86. <https://doi.org/10.1177/016235320202600104>
- Swiatek, M. A., & Cross, T. L. (2007). Construct validity of the social coping questionnaire. *Journal for the Education of the Gifted*, 30(4), 427-449. <https://doi.org/10.4219/jeg-2007-508>
- Swiatek, M. A., & Dorr, R. M. (1998). Revision of the Social Coping Questionnaire: Replication and extension of previous findings. *Journal of Secondary Gifted Education*, 10(1), 252-259. <https://doi.org/10.1177/1932202X9801000105>
- Talbot, R., Cooper, C., & Barrow, S. (1992). Creativity and stress. *Creativity and Innovation Management*, 1(4), 183-193. <https://doi.org/10.1111/j.1467-8691.1992.tb00052.x>
- Torrance, E.P. (1998). *Torrance Tests of Creative Thinking: Norms-Technical Manual Figural (Streamlined) Forms A and B*. Scholastic Testing Service.
- Ward, T. B., Saunders, K. N., & Dodds, R. A. (1999). Creative cognition in gifted adolescents. *Roeper Review*, 21(4), 260-266. <https://doi.org/10.1080/02783199909553973>.
- Whitley, B.E. (2002). *Principles of research in behavioral science* (2nd ed.). Routledge.
- Young, J. H., Story, L., Tarver, S., Weinauer, E., Keeler, J., & McQuirter, A. (2016). The honors college experience reconsidered: Exploring the student perspective. *Journal of the National Collegiate Honors Council – Online Archive*. Paper 524. <https://digitalcommons.unl.edu/nchcjournal/524/>

Author Information

Angie L. Miller, Ph.D. is an Associate Research Scientist at the Indiana University Center for Postsecondary Research. She does research and data analytic support for the National Survey of Student Engagement (NSSE) and the Strategic National Arts Alumni Project (SNAAP). Her research interests include creativity assessment, the utilization of creativity in educational settings, factors impacting gifted student engagement and achievement, and survey methodology.



Individual Difference Predictors of Creative Ideation

Sakhavat Mammadov, Ph.D. 

Abstract

Researchers have long been interested in individual difference variables as predictors of creativity. The focus of most studies has been on the later stages of the creativity process through which creative ideas are transformed into tangible forms, but until recently a very limited empirical base existed to answer questions about why some individuals come up with creative ideas more often than others. The present study examined individual difference predictors of creative ideation among high ability undergraduate students and tested the role of well-being as a moderator in explaining these relationships. Three main findings are revealed. First, openness and extraversion were significantly associated with creative ideation, both positively. Second, creative ideation was also predicted by creative personal identity. Third, subjective well-being had both main and moderating effects on creative ideation. It moderated the relationship between creative personal identity and creative ideation.

Keywords: *Big Five • personality traits • creative ideation • creative personal identity • well-being*

In their investment theory of creativity, Sternberg and Lubart (1996) described creativity as a two-part process. The first part, buying low, refers to investing in novel and unusual ideas, and the second part, selling high, concerns the transmission of those ideas into products. Buying low requires the generation and development of new ideas through creative ideation. Although coming up with creative ideas does not guarantee creative accomplishment, without this initial phase, creativity cannot occur. From the creativity literature, we know specific individual characteristics (e.g., perseverance) and favorable environmental conditions (e.g., autonomy support) are necessary for the successful transmission of creative ideas into products (Anderson et al., 2017; Barbot et al., 2016; Mammadov, 2021a; Yoon et al., 2015). The relatively less explored but highly relevant question is what factors account for differences in creative ideation. Why do some individuals come up with creative ideas more often than others? To that end, the present study sought to examine individual difference predictors of creative ideation, namely, personality traits and creative personal identity, and test the role of well-being as a moderator in explaining these relationships.

Personality and its predictive power for important life outcomes have always been of great interest to researchers and the public. As a formal scientific field, personality psychology dates back to when Allport (1937) published his book, *Personality: A Psychological Interpretation*. The field since then has been developed and given birth to competing theories on individual differences. One area of study has been about identifying the basic dimensional constructs that make up personality. A number of models and taxonomies have been proposed. The Big

Five or the five-factor model (Goldberg, 1981; John & Srivastava, 1999; McCrae & Costa, 1996) is the most popular conceptual model of personality widely used in studying the personality-creativity relationship. As its name suggests, the model consists of five personality traits: openness to new experiences, conscientiousness, extraversion, agreeableness, and neuroticism or emotional stability.

Of the Big Five, openness has been found to be a strong and consistent predictor of creativity across domains and measurements (Furnham et al., 2006; Puryear et al., 2017). Openness, in a broad sense, refers to the extent to which an individual actively seeks a variety of novel experiences and accepts new learning, ideas, and change (McCrae & Costa, 1999). Specific facets of openness such as active imagination and intellectual curiosity seem to tap core aspects of creative engagement. Open individuals tend to entertain novel ideas and unconventional values (Costa & McCrae, 1992). Extraversion has emerged as a second frequently reported personality factor associating with various dimensions of creativity (Feist, 1999; Mammadov et al., 2019). Extraversion refers to the extent to which people are sociable, assertive, and outgoing. Extraverts' tendency to engage in social interactions might be an impetus for creative thinking and ideation.

The association between neuroticism and creative ideation has not been studied extensively but is interesting and worth investigating. Neuroticism refers to individual differences in negative emotionality, anxiety, and emotional reactivity. Some argue that the root cause of neuroticism is the tendency to self-generate negative thoughts and feelings (Perkins et al., 2015). This tendency may lead less emotionally stable individuals to dwell on problems and ideas more often than others. Strong et al. (2007) argued that neurotic tendencies may provide a creative advantage by increasing one's access to a range of affective experiences, particularly negative affects.

DOI: <https://doi.org/10.25774/3kcb-vk65>

Address correspondence to Sakhavat Mammadov, Dewar College of Education and Human Services, Valdosta State University, 1500 North Patterson St., Valdosta, GA 31698. E-mail: smammadov@valdosta.edu

Empirical support for this positive relationship is weak. Only few studies have shown that individuals who score high on neuroticism tend to be more creative than those with low scores (Gelade, 1997; Götzt & Götzt, 1979). Pickering et al. (2016) published a comment on Perkins et al.'s (2015) proposal in which neuroticism was argued to stem from individual differences in neural processes within the default mode network (DMT) that control self-generated thoughts. Pickering suggested that the processes determining the extent to which self-generated thoughts become emotionally negative are largely driven by structures outside the DMT. Creative geniuses who are known to be highly neurotic may achieve creativity not because of their neurotic tendencies but in spite of them.

The traits of agreeableness (i.e., the tendency to be prosocial, cooperative, and empathetic) and conscientiousness have not emerged as correlates of creative ideation. And there is not a convincing conceptual or theoretical basis to anticipate such relationships. Conscientiousness refers to individual differences in self-control, organization, discipline, persistence, hard work, and responsibility (Goldberg, 1993). These characteristics may be important in the transition of creative ideas to products but do not seem to account for individual differences in creative ideation. In their systematic review, Puryear et al. (2017) teased out the personality-creativity relationship by coding the creativity measures as ideation-based (e.g., measures of creative ideation such as divergent thinking tasks) and production-based (e.g., inventories of creative activities). They found that conscientiousness is not related to ideation-based creativity but had a weak positive correlation with production measures. The focus of the present study concerns only three of the Big Five traits: openness, extraversion, and neuroticism.

Creative ideation is also contingent on the individual capability to generate original and potentially useful ideas. One's confidence that one is capable of coming up with creative ideas in solving problems is the key factor in determining the effectiveness of creative functioning (Kaufman & Beghetto, 2009). Creative personal identity, i.e., the belief that creativity is an important part of one's identity, is an integral element of person's self-description (Jausi et al., 2007). Individuals with strong creative role identity are likely to find creativity-related tasks meaningful and be motivated to engage in creative ideation and other creativity inducing activities (Farmer et al., 2003). Creative personal identity, in the present study context, should be conceived as a domain-general view of the self, because the way creative ideation is conceptualized concerns little-c creativity (see Beghetto et al., 2011; Kaufman & Beghetto, 2009).

There are theoretically plausible reasons to expect that happiness or subjective well-being may associate

with creative ideation and possibly moderate the effects of personality traits and creative personal identity. For example, it may be the case that individuals who are open to new experiences, insightful, and aesthetic tend to engage in creative ideation more often when they experience increased happiness. A similar example can be given for extraverted individuals or those with strong creative personal identity. According to Runco (2007), positive mood or affect enhances creativity. Amabile et al. (2005) reported positive associations of creative thinking with positive affect and psychological adjustment. Consistent with these findings, other studies documented that individuals experience greater flourishing and positive affect when they engage in creative ideation and activity (e.g., Conner et al., 2018).

With these in mind, the present study has two primary objectives: (a) to examine the associations of creative ideation with three Big Five personality traits (openness, extraversion, and neuroticism), creative personal identity, and well-being, and (b) to test the moderating role of subjective well-being in terms of the effects of its interactions with other independent variables on creative ideation using a standard procedure (Barron & Kenny, 1986). The sample selected for this study consisted of high ability undergraduate students in honors programs. The sample is unique in that participants are likely to differ from the general population with respect to their personality, creativity, and daily experiences of well-being. High-ability students, on average, were reported to be more open and less neurotic compared to the general population (McCrae et al., 2002; Zeidner & Shani-Zinovich, 2011). Prominent theories of giftedness (e.g., Differentiated Model of Giftedness and Talent, Three-Ring Conception) recognize creativity as an important component of high-ability (Gagné, 2005; Renzulli, 2005). Creativity, along with cognitive ability and academic achievement, is believed to provide a more comprehensive understanding of students' overall abilities.

Method

Participants

A total of 389 (73% female) honors college students from the southeast US participated in this study. Participants ranged in age from 17 to 23, with a mean range of 19.2. Of these participants, 256 (67%) identified themselves as White; 70 (17%) as African American; 33 (9%) as Hispanic and Latino American; and 8 (2.5%) as Asian. The demographic breakdown of participants represents that of the honors college population. The data and criteria that are considered for admission to the honors college include high school GPA of 3.5 or above, rigorous high school courses, high scores on standardized tests such as SAT and ACT, application essay, and recommendation letters.

Table 1: Zero-order Correlations, Descriptive Statistics and Scale Reliabilities ($N = 389$)

	O	E	N	CPI	SWB	CI
O	(.75)					
E	.20**	(.88)				
N	-.09*	-.26**	(.83)			
CPI	.59**	.13**	.03	(.90)		
SWB	.13**	.47**	-.59**	.02	(.90)	
CI	.63**	.28**	-.16**	.66**	.26**	(.83)
M	3.60	3.24	3.07	3.88	4.18	4.86
SD	0.56	0.71	0.84	0.92	0.78	1.27

Note: O = Openness, E = Extraversion, N = Neuroticism, CPI = Creative Personal Identity, SWB = Subjective Well-Being, CI = Creative Ideation. Scale reliabilities are shown along the diagonal.

*Correlation is significant at the .05 level (two tailed)

**Correlation is significant at the .01 level (two tailed)

Measures

Personality Traits

Openness, extraversion, and neuroticism were measured using the revised version of the Big Five Inventory (BFI; John et al., 1991). The three subscales, representing these personality traits, were openness (10 items; e.g., "I see myself as someone who is curious about many different things"), extraversion (8 items; e.g., "I see myself as someone who is full of energy"), and neuroticism (8 items; e.g., "I see myself as someone worries a lot"). The items were rated on a 5-point Likert scale (from 1 = "strongly disagree" to 5 = "strongly agree").

Creative Personal Identity

Five items from Karwowski's (2011) Short Scale of Creative Self were used to measure creative personal identity (e.g., "Being a creative person is important to me"). The items were rated on a 5-point Likert scale (from 1 = "definitely not" to 5 = "definitely yes").

Subjective Well-Being

Participants' subjective well-being or overall happiness was measured using the Oxford Happiness Inventory (OHI; Argyle et al., 1989). The OHI is a 29-item self-report scale (e.g., "I often experience joy and elation") with items rated on a 6-point Likert scale (from 1 = "strongly disagree" to 6 = "strongly agree"). The overall happiness score was calculated as an average of all items.

Creative Ideation

The following three items were used to assess creative ideation: "How frequently do you have creative insights?", "How frequently do you come up with novel plans or goals?", and "How frequently do you think of creative solutions to problems?" (Thrash et al., 2010). Items were rated on a scale from 1 = "never" to 7 = "very often."

Procedure

The sample was recruited by e-mail through student listservs. Participants completed self-report measures of personality traits, creative personal identity, well-being, and creative ideation using Qualtrics. The survey also consisted of several demographic items. Little's (1988) chi-square test were used to examine patterns of missing data. Results revealed that missing data were missing completely at random (MCAR), suggesting case deletion to be valid (Rubin, 1976). To minimize potential effects of missing data, nine cases with more than 15% missing data were excluded. Stochastic regression imputation was used to estimate and replace the remaining missing values. Analyses were conducted using MPlus 8.4 (Muthén & Muthén, 2017).

Results

Scale reliabilities, descriptive statistics, and zero-order correlations among the study variables are presented in Table 1. Scales demonstrated acceptable reliabilities ranging from $\alpha = .76$ (openness) to $\alpha = .93$ (subjective well-being). Extraversion had a moderate positive association with subjective well-being ($r = .47$) and small positive associations with creative personal identity and creative ideation ($r = .13$ and $r = .28$, respectively). Neuroticism was strongly correlated with subjective well-being, but the direction was negative ($r = -.59$). Neuroticism had also a small negative correlation with creative ideation ($r = -.16$). Openness was positively and strongly related to creative personal identity ($r = .59$) and creative ideation ($r = .63$). Subjective well-being did not have a significant association with creative personal identity but was significantly and positively correlated with creative ideation ($r = .26$).

Hierarchical multiple regression analysis was performed to examine the hypothesized relationships. Predictors were entered into the model in sets and in four steps. In the first block, creative ideation was regressed on personality traits (openness, extraversion, and neuroticism). Creative personal identity and subjective

Table 2: Hierarchical Regression Analysis Results Using Creative Ideation as the Criterion

Predictors	Step			
	1	2	3	4
O	.64 ***	.39***	.38***	.38***
E	.15**	.13**	.11**	.11**
N	-.05	-.07*	-.02	-.03
CPI		.40***	.41***	.42***
SWB			.14**	.13**
O x SWB				.04
E x SWB				.01
N x SWB				.03
CPI x SWB				-.08*
ΔR^2	.50***	.10***	.02**	.01

Note: O = Openness, E = Extraversion, N = Neuroticism, CPI = Creative Personal Identity, SWB = Subjective Well-Being.
* $p \leq .05$, ** $p < .01$, *** $p < .001$.

well-being were introduced in the second and third steps, respectively. Moderating effects of subjective well-being were explored by introducing interaction variables of personality traits and creative personal identity with happiness in the last step. All predictor variables were mean-centered prior to creating interaction terms to eliminate multicollinearity problems (Aiken & West, 1991). In addition, because data were obtained in the same context through self-report, common method bias was examined using post-hoc Harman's single-factor test and a single-method-factor approach (Podsakoff et al., 2003). Results indicated that the common method effects were not likely to distort the study results.

Regression results are summarized in Table 2. Creative ideation was associated with personality traits, with about 50% of variance being explained largely by openness and extraversion ($R^2 = .498$, $p < .001$). Neuroticism did not emerge as a significant predictor. Creative personal identity explained an additional 9% of variance in creative ideation (R^2 change = .078, F change = 86.49, $p < .001$). A significant change in R^2 was observed by inclusion of subjective well-being (R^2 change = .009, F change = 8.48, $p = .004$). Including interactions in the final step did not yield a significant improvement in the overall model. Only the effect of creative personal identity was found to be moderated by subjective well-being ($\beta = -.08$, $p = .04$). Further analysis suggested that creative ideation was significantly predicted only for students with average subjective well-being ($\beta = .23$, $p < .001$). The slopes were not significant for those with high (+1 SD above mean) and low (-1 SD below mean) subjective well-being levels. No collinearity issue was observed for the regression analysis. All Variance Inflation Factors (VIF) were below 2.

Discussion

The present results add to our growing understanding of how openness is critical throughout the process of creative endeavors. Openness emerges as an extremely

functional and essential personality trait for a wide range of educational and life outcomes, including creative productivity (Gatzka, 2021; Mammadov, 2021b;). Ideation is an important constituent of creative productivity concerning its initial stages where generation, development, and communication of diverse thinking take place. It serves as a starter for a creative process. The role of openness in this process appears to be significant from the beginning and throughout the process. It may even be more important in the initiation than in the transmission of ideas into products. Previous studies reported that the relationship of openness with creative ideation was stronger than its relationship with creative products (e.g., Bridges & Schendan, 2019).

Originality (i.e., relative novelty of ideas) and fluency (i.e., the quantity of different ideas one generates) are two independent constituents of creative thinking. Flexibility enhances the capacity of individuals to achieve these outcomes and be able to approach problems from unexpected angles (Baas et al., 2013). Cognitive flexibility is the ease with which individuals can shift to a different thought and approach (Sanders et al., 2008). Individuals with high cognitive flexibility are likely to find new connections among ideas by using broad and inclusive cognitive categories (Eysenck, 1993; Friedman & Förster, 2010). Flexibility has also been studied in the personality literature. Openness is closely related to flexibility (Baas et al., 2013). Individuals with high scores on openness tend to receive new information without fear and prejudice (Thurston & Runco, 1999). Therefore, they have more flexibility in generating novel ideas through insightful understanding of that information.

Another notable result was the significant relationship between extraversion and creative ideation. Extraversion has been found to be related to various dimensions of creativity (Feist, 1998; Furnham & Bachtar, 2008; Mammadov et al., 2019; Puryear et al., 2017), including when assessed with divergent thinking tasks (King et al., 1996). This link could be interpreted in terms of flexibility, too. Extraverts, like open individuals, tend to explore their environments more often than others (Jung, 1971). Constant engagement with their environment and frequent social interactions may provide them with varied experiences and, therefore, heightened flexibility.

A further possible explanation may be linked to Mednick's (1962) model on creativity-related differences in associative hierarchies. Associative hierarchies refer to "the idea that for any given concept there is a set of associations which can be arranged in the order of their associative strength" (Benedek & Neubauer, 2013, p. 274). Mednick argued that creative individuals are characterized by flatter associative hierarchies, which means that they are able to retrieve more remote association responses when presented with a new concept. Both openness and extraversion are related to the use of flat associative hierarchies (Martindale, 1995). Open and extravert

individuals are not as able as others to filter out previously experienced seemingly irrelevant stimuli from their attentional focus, which leads those stimuli to enter their working memory easily (Peterson et al., 2002). These diverse and available elements enhance originality and fluency and lead them to generate creative ideas (Baas et al., 2013; Carson et al., 2003).

Creative personal identity was another significant predictor of creative ideation, explaining an additional 9% of the variance. This result confirms the findings from previous studies on the importance of self-beliefs in creative thinking and behaviors (Karwowski et al., 2013; Tierney & Farmer, 2011). Participants seeing creativity as a part of their identity seemed to report that they frequently have creative insights and very often come up with novel plans or goals. Creative personal identity can also be interpreted in terms of the value people attribute to creativity (Plucker & Makel, 2010). Creative ideation is an activity that people, in general, are autonomously motivated to pursue. The more value an individual places on it, the more they are engaged in creative ideation.

The moderating role of subjective well-being in the relationship between creative personal identity and creative ideation is worth noting. Results suggested that creative personal identity predicted ideation only for students with average happiness. No significant relationships were observed for students with happiness scores outside one standard deviation of the mean. Subjective well-being had also a significant main effect on creative ideation. This result is in line with the findings from previous studies, demonstrating the tendency for happiness to be positively correlated with elements of creativity (Amabile et al., 2005; Baas et al., 2008; Runco, 2007). The results imply that happy people engage in creative ideation more often than others. There is evidence from previous research that the state of unhappiness (i.e., being sad or angry) might lead to increased creative ideation, too, but it does decline over time (Baas et al., 2011). Perhaps those individuals tend to switch between ideas without meaningful connections. In addition, individuals with low happiness may engage in creative ideation but are less likely to have a systematic and structured way of approaching creative tasks.

Several possible limitations to the present study are worth noting. First, data were collected through self-report

measures. Although efforts were undertaken to examine and control common method bias, multiple data sources would allow more accurate estimates. Second, using a facet-level personality scale would be helpful in better understanding relationships. For example, neuroticism did not emerge as a significant predictor, but it might be possible that specific sub-traits do, in fact, contribute to creative ideation. Third, the sample was limited to honors college students from one state. This limitation precludes our ability to generalize findings to all honors and other undergraduate students.

Conclusion

The present study sought to investigate individual difference predictors of creative ideation—with a particular interest in personality traits, creative personal identity, and subjective well-being. It revealed three main findings. First, consistent with prior research (Puryear et al., 2017; Mammadov, 2021a), openness and extraversion were significantly associated with creative ideation. These personality traits are malleable and dynamic (Roberts & DelVecchio, 2000). The positive qualities of traits can be developed and reinforced as a part of school pedagogy and college readiness pathway. Second, creative ideation was also predicted by creative personal identity. The stronger the creative personal identity, the more frequently one experiences creative ideation. Students, in both K-12 and university settings, could be encouraged to be frequently involved in creative activities which may result in creativity become a stronger component of how they see themselves. Third, subjective well-being had both main and moderating effects on creative ideation. Positive interventions and support in the honors college context are quite important for helping students to improve or maintain their well-being. These students may experience more challenges and stressors than other undergraduate students due to increased achievement pressure in a competitive learning environment of honors program. Students with positive well-being are not only likely to excel academically, but also likely to engage in creative ideation and productivity in various domains.

References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Sage.
- Allport, G. (1937). *Personality: A psychological interpretation*. Henry Holt and Company.
- Amabile, T.M., Barsade, S.G., Mueller, J.S., & Staw, B.M. (2005). Affect and creativity at work. *Administrative Science Quarterly*, 50(3), 367-403. <https://doi.org/10.2189/asqu.2005.50.3.367>
- Anderson, R. C., Pitts, C., & Smolkowski, K. (2017). Creative ideation meets relational support: Measuring links between these factors in early adolescence. *Creativity Research Journal*, 29(3), 244-256. <https://doi.org/10.1080/10400419.2017.1360057>
- Argyle, M., Martin, M., & Crossland, J. (1989). Happiness as a function of personality and social encounters. In J. P. Forgas, & J. M. Innes (Eds.), *Recent advances in social psychology: An international perspective* (pp. 189-203). Elsevier.
- Baas, M., De Dreu, C. K. W., & Nijstad, B. A. (2008). A meta-analysis of 25 years of mood-creativity research: Hedonic tone, activation, or regulatory focus? *Psychological Bulletin*, 134(6), 779-806. <https://doi.org/10.1037/a0012815>
- Baas, M., De Dreu, C. K. W., & Nijstad, B. A. (2011). Creative productivity by angry people peaks early on, declines over time, and is relative unstructured. *Journal of Experimental and Social Psychology*, 47(6), 1107-1115. <https://doi.org/10.1016/j.jesp.2011.05.009>
- Baas, M., Roskes, M., Sligte, D., Nijstad, B. A., & De Dreu, C. K. W. (2013). Personality and creativity: The dual pathway to creativity model and a research agenda. *Social and Personality Psychology Compass*, 7(10), 732-748. <https://doi.org/10.1111/spc3.12062>
- Barbot, B., Lubart, T. I., & Besancon, M. (2016). "Peaks, slumps, and bumps": Individual differences in the development of creativity in children and adolescents. In B. Barbot (Ed.), *Perspectives on creativity development: New directions for child and adolescent development* (pp. 33-45). Jossey-Bass. <https://doi.org/10.1002/cad.20152>
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182. <https://doi.org/10.1037/0022-3514.51.6.1173>
- Beghetto, R.A., Kaufman, J.C., & Baxter, J. (2011). Answering the unexpected questions: Exploring the relationship between students' creative self-efficacy and teacher ratings of creativity. *Psychology of Aesthetics, Creativity, and the Arts*, 5(4), 342-349. <https://doi.org/10.1037/a0022834>
- Benedek, M., & Neubauer, A. C. (2013). Revisiting Mednick's model on creativity-related differences in associative hierarchies. Evidence for a common path to uncommon thought. *Journal of Creative Behavior*, 47(4), 273-289. <https://doi.org/10.1002/jocb.35>
- Bridges, D., & Schendan, H. E. (2019). The sensitive, open creator. *Personality and Individual Differences*, 142(1), 179-185. <https://doi.org/10.1016/j.paid.2018.09.016>
- Carson, S. H., Peterson, J. B., & Higgins, D. M. (2003). Decreased latent inhibition is associated with increased creative achievement in high-functioning individuals. *Journal of Personality and Social Psychology*, 85(3), 499-506. <https://doi.org/10.1037/0022-3514.85.3.499>
- Conner, T.S., DeYoung, C.G., & Silvia, P.J. (2018). Everyday creative activity as a path to flourishing. *Journal of Positive Psychology*, 13(2), 181-189. <https://doi.org/10.1080/17439760.2016.1257049>
- Costa, P. T., & McCrae, R. R. (1992). The five-factor model of personality and its relevance to personality disorders. *Journal of Personality Disorders*, 6(4), 343-359. <https://doi.org/10.1521/pedi.1992.6.4.343>
- Eysenck, H. J. (1993). Creativity and personality: Suggestions for a theory. *Psychological Inquiry*, 4(3), 147-178. https://doi.org/10.1207/s15327965pli0403_1
- Farmer, S.M., Tierney, P., & Kung-McIntyre, K. (2003). Employee creativity in Taiwan: An application of role identity theory. *Academy of Management Journal*, 46(5), 618-630. <https://doi.org/10.5465/30040653>
- Feist, G. J. (1999). Influence of personality on artistic and scientific creativity. In R. J. Sternberg (Ed.), *Handbook of creativity* (pp. 273-296). Cambridge University Press. <https://doi.org/10.1017/CBO9780511807916.016>
- Feist, G.J. (1998). A meta-analysis of the impact of personality on scientific and artistic creativity. *Personality and Social Psychological Review*, 2(4), 290-309. https://doi.org/10.1207/s15327957pspr0204_5
- Friedman, R. S., & Förster, J. (2010). Implicit affective cues and attentional tuning: An integrative review. *Psychological Bulletin*, 136(5), 875-893. <https://doi.org/10.1037/a0020495>
- Furnham, A., & Bachtiar, V. (2008). Personality and intelligence as predictors of creativity. *Personality and Individual Differences*, 45(7), 613-617. <https://doi.org/10.1016/j.paid.2008.06.023>
- Furnham, A., Zhang, J., & Chamorro-Premuzic, T. (2006). The relationship between psychometric and self-estimated intelligence, creativity, personality, and academic achievement. *Imagination, Cognition, and Personality*, 25(2), 119-145. <https://doi.org/10.2190/530V-3M9U-7UQ8-FMBC>
- Gagné, F. (2005). From gifts to talents: The DMGT as a developmental model. In R. J. Sternberg & J. E. Davidson (Eds.), *Conceptions of giftedness* (2nd ed., pp. 98-120), Cambridge University Press. <https://doi.org/10.1017/CBO9780511610455.008>
- Gatzka, T. (2021). Aspects of openness as predictors of academic achievement. *Personality and Individual Differences*, 170, 110422. <https://doi.org/10.1016/j.paid.2020.110422>
- Gelade, G. A. (1997). Creativity in conflict: The personality of the commercial creative. *Journal of Genetic Psychology*, 158(1), 67-78. <https://doi.org/10.1080/00221329709596653>
- Goldberg, L. R. (1981). Language and individual differences: The search for universals in personality lexicons. *Review of Personality and Social Psychology*, 2, 141-165.

- Goldberg, L. R. (1993). The structure of phenotypic personality traits. *American Psychologist*, 48, 26-34. <https://doi.org/10.1037/0003-066X.48.1.26>
- Götz, K. O., & Götz, K. (1979). Personality characteristics of successful artists. *Perceptual and Motor Skills*, 49(3), 919-924. <https://doi.org/10.2466/pms.1979.49.3.919>
- Jaussi, K.B., Randel, A.E., & Dionne, S.D. (2007). I am, I think, and I do: The role of personal identity, self-efficacy, and cross-applications of experiences in creativity at work. *Creativity Research Journal*, 19(2-3), 247-258. <https://doi.org/10.1080/10400410701397339>
- John, O. P., & Srivastava, S. (1999). The Big-Five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (2nd ed., pp. 102-138). Guilford Press.
- John, O. P., Donahue, E. M., & Kentle, R. L. (1991). *The Big Five Inventory - Versions 4a and 54*. University of California, Berkeley, Institute of Personality and Social Research. <https://doi.org/10.1037/t07550-000>
- Jung, C. G. (1971). *Psychological types*. Princeton University Press.
- Karwowski, M. (2011). Creative mindsets: Measurement, correlates, consequences. *Psychology of Aesthetics, Creativity, and the Arts*, 8(1), 62-70. <https://doi.org/10.1037/a0034898>
- Karwowski, M., Lebuda, I., Wisniewska, E., & Gralewski, J. (2013). Big Five personality traits as the predictors of creative self-efficacy and creative personal identity: Does gender matter? *Journal of Creative Behavior*, 47, 215-232. <https://doi.org/10.1002/jocb.32>
- Kaufman, J.C., & Beghetto, R.A. (2009). Beyond big and little: The four C model of creativity. *Review of General Psychology*, 13, 1-12. <https://doi.org/10.1037/a0013688>
- King, L.A., Walker, L.M., & Broyles, S.J. (1996). Creativity and the five-factor model. *Journal of Research in Personality*, 30(2), 189-203. <https://doi.org/10.1006/jrpe.1996.0013>
- Little, R. J. A. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association*, 83(404), 1198-1202. <https://doi.org/10.1080/01621459.1988.10478722>
- Mammadov, S. (2021a). A comparison of creativity-relevant personal characteristics in adolescents across personality profiles. *Journal of Creative Behavior*, 5, 294-305. <https://doi.org/10.1002/jocb.451>
- Mammadov, S. (2021b). The Big Five personality traits and academic performance: A meta-analysis. *Journal of Personality*, 90, 222-255. <https://doi.org/10.1111/jopy.12663>
- Mammadov, S., Cross, T. L., & Cross, J. R. (2019). In search of personality and temperament predictors of creativity: A test of mediation. *Creativity Research Journal*, 31(2), 174-187. <https://doi.org/10.1080/10400419.2019.1577085>
- Martindale, C. (1995). Creativity and connectionism. In S. M. Smith, T. B. Ward, & R. A. Finke (Eds.), *The Creative Cognition Approach* (pp. 249-268). MIT Press.
- McCrae, R. R., & Costa, P. T. Jr. (1999). A five-factor theory of personality. In L. A. Pervin & O. P. John (Eds.), *Handbook of Personality* (pp. 139-153). Guilford Press.
- McCrae, R. R., & Costa, P. T., Jr. (1996). Toward a new generation of personality theories: Theoretical contexts for the Five-Factor Model. In J. S. Wiggins (Ed.), *The Five-Factor Model of personality: Theoretical perspectives* (pp. 51-87). Guilford Press.
- McCrae, R. R., Costa P. T. Jr., Terracciano, A., Parker, W. D., Mills, C. J., De Fruyt, F., & Mervielde, I. (2002). Personality trait development from age 12 to age 18: Longitudinal, cross-sectional and cross-cultural analyses. *Journal of Personality and Social Psychology*, 83(6), 1456-1468. <https://doi.org/10.1037/0022-3514.83.6.1456>
- Mednick, S.A. (1962). The associative basis of the creative process. *Psychological Review*, 69(3), 220-232. <https://doi.org/10.1037/h0048850>
- Muthén, L. K., & Muthén, B. (2017). *Mplus User's Guide*. Muthén & Muthén.
- Perkins, A. M., Arnone, D., Smallwood, J., & Mobbs, D. (2015). Thinking too much: Self-generated thought as the engine of neuroticism. *Trends in Cognitive Sciences*, 19(9), 492-498. <https://doi.org/10.1016/j.tics.2015.07.003>
- Peterson, J. B., Smith, K. W., & Carson, S. (2002). Openness and extraversion are associated with reduced latent inhibition: Replication and commentary. *Personality and Individual Differences*, 33(7), 1137-1147. [https://doi.org/10.1016/S0191-8869\(02\)00004-1](https://doi.org/10.1016/S0191-8869(02)00004-1)
- Pickering, A. D., Smillie, L. D., & DeYoung, C. G. (2016). Neurotic individuals are not creative thinkers. *Trends in Cognitive Sciences*, 20(1), 1-2. <https://doi.org/10.1016/j.tics.2015.10.001>
- Plucker, J.A., & Makel, M.C. (2010). Assessment of creativity. In J.C. Kaufman, & R.J. Sternberg (Eds.). *The Cambridge handbook of creativity* (pp. 48-74). Cambridge University Press. <https://doi.org/10.1017/CBO9780511763205.005>
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88, 879-903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Puryear, J. S., Kettler, T., & Rinn, A. N. (2017). Relationships of personality to differential conceptions of creativity: A systematic Review. *Psychology of Aesthetics, Creativity, and the Arts*, 11(1), 59-68. <https://doi.org/10.1037/aca0000079>
- Renzulli, J. S. (2005). The three-ring definition of giftedness: A developmental model for promoting creative productivity. In R.J. Sternberg & J. E. Davidson (Eds.), *Conceptions of Giftedness* (2nd ed., pp. 246-280). Cambridge University Press. <https://doi.org/10.1017/CBO9780511610455.015>
- Roberts, B. W., & DeVecchio, W. F. (2000). The rank-order consistency of personality traits from childhood to old age: A quantitative review of longitudinal studies. *Psychological Bulletin*, 126(1), 3-25. <https://doi.org/10.1037/0033-2909.126.1.3>
- Rubin, D.B., (1976) Inference and Missing Data. *Biometrika*, 63(3), 581-592. <https://doi.org/10.1093/biomet/63.3.581>
- Runco, M. A. (2007). *Creativity theories and themes: Research development, and practice*. Elsevier Academic Press.

- Sanders, J., Johnson, K., Garavan, H., Gill, M., & Gallagher, L. (2008). A review of neuropsychological and neuroimaging research in autistic spectrum disorders: Attention, inhibition and cognitive flexibility. *Research in Autism Spectrum Disorders*, 2(1), 1-16. <https://doi.org/10.1016/j.rasd.2007.03.005>
- Sternberg, R. J., & Lubart, T. I. (1996). Investing in creativity. *American Psychologist*, 51(7), 677-688. <https://doi.org/10.1037/0003-066X.51.7.677>
- Strong, C. M., Nowakowska, C., Santosa, C. M., Wang, Po W., Kraemer, H. C., & Ketter, T. A. (2007). Temperament-creativity relationships in mood disorder patients, healthy controls and highly creative individuals. *Journal of Affective Disorders*, 100(1), 41-48. <https://doi.org/10.1016/j.jad.2006.10.015>
- Thrash, T. M., Maruskin, L. A., Cassidy, S. E., Fryer, J. W., & Ryan, R. M. (2010). Mediating between the muse and the masses: Inspiration and the actualization of creative ideas. *Journal of Personality and Social Psychology*, 98(3), 469-487. <https://doi.org/10.1037/a0017907>
- Thurston, B. J., & Runco, M. A. (1999). Flexibility. In M. A. Runco & S. R. Pritzker (Eds.), *Encyclopedia of creativity* (pp. 729-732). Academic Press.
- Tierney, P., & Farmer, S.M. (2002). Creative self-efficacy: Potential antecedents and relationship to creative performance. *Academy of Management Journal*, 45(6), 1137-1148. <https://doi.org/10.5465/3069429>
- Yoon, H. J., Sung, S. Y., Choi, J. N., Lee, K., & Kim, S. (2015). Tangible and intangible rewards and employee creativity: The mediating role of situational extrinsic motivation. *Creativity Research Journal*, 27(4), 383-393. <https://doi.org/10.1080/10400419.2015.1088283>
- Zeidner, M., & Shani-Zinovich, I. (2011). Do academically gifted and nongifted students differ on the Big-Five and adaptive status? Some recent data and conclusions. *Personality and Individual Differences*, 51(5), 566-570. <https://doi.org/10.1016/j.paid.2011.05.007>

Author Information

Sakhavat Mammadov, Ph.D. is an assistant professor in the Dewar College of Education and Human Services at Valdosta State University (VSU). Dr. Mammadov received his PhD from William & Mary in Educational Policy, Planning, and Leadership with an emphasis in Gifted Education. He worked as a postdoctoral research associate for the University of Washington's (UW) Halbert and Nancy Robinson Center for Young Scholars prior to his appointment at VSU. His primary research interest is to examine and explore issues dealing with the social and emotional needs of children with gifts and talents.



Interview

A Native Insight into Giftedness: An Interview with Dr. Charmaine L. Shutiva

Charmaine L. Shutiva, Ph.D.
Interviewed by Tracy L. Cross, Ph.D. 

In the summer of 2021, Tracy L. Cross invited Dr. Charmaine L. Shutiva to share her most unique experience of advocacy in our field. After serving for many years with Dr. Shutiva on the Council for Exceptional Children – The Association for the Gifted (CEC-TAG), Dr. Cross knew others could learn from her experience. In describing how she came to develop a gifted and talented program on a Pueblo in New Mexico, Dr. Shutiva offers insight into how the psychology of giftedness may be different in a Native American population.



Dr. Charmaine L. Shutiva

My First Day of School

She said we could go. I interpreted it to mean we could go home. So, I walked up to my empty house that was just up the hill from the Bureau of Indian Affairs (BIA) school, McCarty's Day School, that was on the Acoma Pueblo reservation. What Ms. Oleman meant was for us kindergarteners to go outside and play.

When I got home, I changed from my school clothes to my play clothes. I peeped through the curtains and wondered why the other kids were not going home. I heard the hand bell ring and all the kids went back inside the classroom. Ms. Oleman must have realized I was not in my seat, so she sent Uncle Tom, our bus driver and maintenance man, to come get me. My mother told me never to open the door. He called for me to come out. No way. He walked back down to the school and soon I saw Grandma Juana, our janitor and educational assistant, come to get me. No way. My mother said not to open the door. She too walked down the hill to the school without me. Through the curtains I could see Ms. Oleman not walking, but storming, up the hill in her button-up shoes, bun on top of her head, and her skirt swaying back and forth. I could tell by her manner she was *mad*. My mother had told me I *had* to listen to Ms. Oleman. She was my teacher and also the principal of the school. So, when she knocked on the door I opened it. She grabbed me by my arm and marched me back to school. I wanted to change back into my school clothes, but she just grabbed me and took me down the hill to the three-room K-6th grade school. All the children laughed at me when I walked into the classroom in my play clothes. I cried. I told Ms. Oleman as she was walking me down to the school that I thought she meant, "go home" when she said, "go." It

was around 10:00 in the morning. This was my first day of school, the beginning of my education.

I spent one week in kindergarten, then I was promoted to first grade because I could speak and read English better than my classmates. My Anglo father did not allow our tribal language, Keres, to be spoken in the household. My classmates were punished if they spoke Acoma on the school grounds. Ms. Oleman would swat my classmates with a big paddle that had holes in it if they were caught speaking Keres. Sometimes after they got swatted, they got a bar of soap put in their mouths. Out of the hearing range of Ms. Oleman, Uncle Tom and Grandma Juana would plead with my friends, in Keres, not to speak our language. I'm sure it was hard for Uncle Tom and Grandma Juana to inflict this punishment. I, too, would beg my friends not to speak Keres so they wouldn't get the soap in their mouths and/or get swatted. Many of my classmates spoke limited English. I would try to help my girlfriends during recess to improve in speaking English, even though the older kids made fun of me because I did not speak much Keres.

After my fifth-grade year, the BIA closed McCarty's Day School, and we were all bused off the reservation to Grants or Cubero. This was the first time I interacted with non-Acomas or non-Indians other than going to do laundry or to go grocery shopping in Grants. I excelled in school. "How could an Indian be so smart?" I'd hear them saying.

I did well, academically, in junior high and high school. I also did well socially, as I was a member of Student Council, Future Teachers of America, and Honor Society. It was not until I attended Wellesley College that I met with prejudice and disrespect for being Native American.

Too Embarrassed

"I was too embarrassed to walk out of the room" is what my mother told me after she got home from a national conference on tribal programs that she was attending my senior year in high school. My mother had accidentally walked into the wrong room. In this room was a woman, Ms. Marilyn Kimble, who was a recruiter for the "Seven Sister Colleges." My mother spoke to her about having a daughter who was a senior. The next day my mother and

I drove back to Albuquerque from Acoma to meet with Ms. Kimble in her hotel room where she interviewed me and helped me complete an application to Wellesley College. Neither my mother nor I had ever heard of Wellesley College. I applied and I was accepted.

Wellesley Experience

I attended Wellesley College for three years. During my junior year I transferred to New Mexico State University for my mental and emotional stability. There were three other Native American girls at Wellesley when I first started. Two of us graduated. I returned to Wellesley my senior year and graduated in 1976 with a stronger, more acute desire to work with Native communities.

The experiences attending Wellesley College and my later internships at the summer camps for gifted children that TAMU held in Galveston, Texas were challenging, but helped me to define who I was and what was important to me. In both of these experiences, I saw or heard the mostly Euro-Americans displaying a privileged attitude that was difficult for me to understand, but also strengthened my Native beliefs and values that are community-based and emphasize sharing and giving.

Gifted Education and Me

I was working as a Special Education Coordinator/Counselor at Canoncito Community School (now To'hajiilee Community School) in 1983-85. It is located on the Navajo nation. My principal had heard that the Bureau of Indian Affairs (now Bureau of Indian Education) was providing funding to help identify and educate gifted and talented Native American children. He asked me to begin a gifted and talented program. My response was, "What is a gifted and talented program?" He did not know. I did not know. I decided I needed to investigate and learn what a gifted and talented program entailed so I could develop one. I went to the University of New Mexico library and started researching gifted education.

As I was researching gifted education, Texas A & M University (TAMU) kept coming up in my searches. I told my principal I could not develop a program I knew nothing about. I decided to go to TAMU to learn more about gifted education.

I learned about gifted education and in doing so I also earned a doctorate degree in Educational Psychology from TAMU. My dissertation was titled, "Creativity Differences Between Reservation and non-Reservation Native Americans." I loved working on my dissertation, but it was also frustrating, as there was limited—and I mean limited—information about Alaskan Native, Hawaiian Native, and Native American gifted children. One might almost say it was nonexistent in 1986.

Go Teach Them

In learning about gifted education at TAMU I always had an uneasy feeling in the pit of my stomach about the word, "gifted" and identifying a person as "gifted." I had to do a lot of "soul searching" to help to understand why I was feeling so uncomfortable and almost resistant to using the word, "gifted." I had some "interesting" discussions in my initial classes at TAMU.

I was torn. I was confused. I eventually concluded that the perplexity and resistance I was feeling was because I was only learning the "White man's" definition of giftedness. I interpreted this definition as being "superior," "individualistic," or "better than thou."

To survive, I had to reorganize my thinking. I had to create my own definition of giftedness from my Native perspective. To be able to do this I had to re-center myself.

I don't know how often I found myself making the 16-hour drive from College Station to my mother's home at Acoma to regain balance and harmony. I needed to find my balance.

I had to have a cleansing ceremony performed for me as I "was losing my way" or "getting out of balance" and I was becoming sick in mind, body, and spirit. Having and maintaining harmony and balance is so important in our Pueblo culture. My classmates at TAMU could not understand why I would make the 16-hour drive on the weekends just to be home for only a few hours and then have to drive right back to College Station. I had to do this, or I probably would have dropped out of college. At times, the heavy discussions in my classes in which I felt I was defending my Native perspective of giftedness, were difficult and definitely lonely. There were no other Native Americans in the doctoral programs at TAMU who I could talk to about my frustrations. As far as I knew, there was no other Native American studying gifted education at the doctoral level anywhere.

On one of my visits home, I was visiting with my mother in her kitchen and was sharing with her my frustrations. She said, "Go teach them. Teach them about who we are." I needed to hear that. Her words helped to affirm I was in the right place and doing the right thing to help Native children.

After graduating from TAMU, I went back to To'hajiilee Community School all excited and ready to develop the gifted and talented program. There was a new principal. I told him with enthusiasm and excitement in my voice that I returned to work there to establish the *best* gifted program. His response (I'll never forget) was, "You are overqualified." He would not hire me. I was crushed. I drove away from the school, parked at the trading post, and cried.

With a crushed heart and needing a job to pay for my student loans, I applied for a counseling position at a brand new elementary and junior high school in Rio Rancho. I

was hired. It was a great job. I loved counseling, but my desire to develop a gifted program was still there in the back of my mind.

In 1992, I received a phone call from a woman, Barbara DeLoch, who in 1985 was the Director of Special Education for the Navajo Nation. She was the person who made sure I complied with federal Special Education rules and guidelines when I worked at To'hajiilee Community School. She had heard I was back from TAMU and asked me if I would like to develop a gifted program for Isleta Elementary School. "Would I? Would I?" My prayers were answered. In the middle of the school year, I left Enchanted Hills Elementary School in Rio Rancho to develop a gifted program for Isleta Pueblo children.

Development of the Creativity Abounds Program

I am Water Clan

In the development of the gifted program, I knew that I could not call it "the gifted program." My Native American value discourages individualism and bringing attention to oneself. Acoma is a maternal society. My grandmother was Water Clan. My mother was Water Clan. I am Water Clan. My daughter is Water Clan. My husband, Ron, is Sun Clan, because his grandmother and mother were Sun Clan. Knowing your clan is important in the Pueblo culture, as well as in my Navajo culture. Navajo children are traditionally taught when they introduce themselves that they identify first their maternal grandparents' clans and then their fraternal grandparents' clans, as in most Native tribes we identify ourselves by both of our parents' clans. I am Water Clan and am baby Eagle Clan from my grandfather. Having this strong kinship beyond the family helps teach and reinforce our cultural values and beliefs.

I share this information about my clanship because in teaching Native American gifted children, the family identifications can become confusing to a non-Native teacher. They may identify their "cousin" as brother or sister when introducing them, as this is the way they were taught in the home.

Giving and Sharing

Our Native value of sharing and giving is important. Throughout our existence, Native tribes have had individuals who could be identified as "gifted." For example, arrowhead makers, pottery makers, song composers, drum makers, drummers, herbalists, healers, animal trackers, moccasin maker, and story tellers. These individuals who have these "gifts" have always been recognized, highly valued, and appreciated. They often freely share their skills, talents, and knowledge for the betterment and survival of the tribe.

In my Pueblo culture we express the importance of giving and sharing by having social and religious activities

that involve sharing our harvests, food, and water. My non-Native friends were always surprised at how I would bring food (e.g., donuts, cookies, biscuits) to class, to meetings, to most social gatherings. It is important to share. In the classroom, even though boxes of crayons and other supplies were distributed to individual students, it is not uncommon for Native children to share their assigned scissors, pencils, crayons, and the like.

During my years teaching gifted Native children I tried to create opportunities for my scholars to share their gifts and talents. I frequently had parents and grandparents into my classroom to see what their children were doing and to share their knowledge of a certain topic. I had my artistically gifted students enter state and regional art shows as often as possible. I received grants to have my scholars interact with the elderly program. One grant involved studying the impact of the railroad through the reservation by interviewing elders. Another grant was studying the architecture of Pueblo houses. With the elders, we took a field trip to Chaco Canyon.

Thus, with clanship, giving and sharing, and the multitude of various Native gifts and talents to be creating the gifted program at Isleta Elementary School, I called it the Creativity Abounds Program (CAP). I felt this title helped to encourage diversity of gifts and talents: Creativity = original ideas, all talents, Native or non-Native; Abounds = plentiful, supporting our Native value of sharing and giving.

What I Learned in Developing a Gifted Program for Native Pueblo Children

First, I had to learn the BIA gifted and talented guidelines in order for the school to receive funds to support the development of a gifted program.

Second, I had to know what kind of gifted program the people of Isleta Pueblo and the staff of Isleta Elementary School wanted. Thus, I developed a survey to identify what areas of interests and skills the community of Isleta would like to have emphasized and integrated as major components of the gifted program. For example...Native music/dance? Native history and government? Native cultural arts like pottery making, kilt making, jewelry making? Environmental issues / science? Fine arts—painting, drawing, sculpture? Technology/computers? Storytelling? Native Literature? Reading? Math?

Third, just like me when my principal at To'hajiilee asked me to develop a gifted program and I did not know what it was, I had to educate the community and staff of Isleta Elementary School about what gifted education is and how, using the BIA gifted and talented guidelines, we could identify and serve these special individuals. I presented information about gifted education at staff meetings. I wrote articles about gifted education in the community newsletter. I presented at school board meetings. I sent out flyers about gifted education.

Fourth, according to the BIA gifted and talented guidelines, I had to have a Board of Directors to oversee my program and help to identify the children to be served by the gifted program. Besides my principal, I recruited three teachers to be on this board.

How did it go?

Much to my surprise, the survey indicated the number one interest was technology. From the results and comments on the survey, it was clear the community wanted their identified gifted children to be able to compete with the non-native world in technology and usage of computers. They felt that it was the families who should teach culture-related skills and interests.

After technology, the next important emphasis was reading. Based upon these survey results, I used the gifted funds to purchase computers and printers for the gifted classroom. Later, I purchased laptops that my scholars were able to take home. I also bought books with Native American themes for the classrooms and library.

Using Native American Values in the Gifted Classroom

Cooperation. As my gifted students learned a skill in the gifted classroom, it was a requirement that they go back to their classroom and teach one or two other scholars what they learned. As much as possible, I had multi-grade level scholars in my gifted classroom at the same time, so the older scholars could teach the younger children. As the years went on, my teacher colleagues would ask for some of the gifted scholars to help with some math or reading lessons in their classrooms. Also, my advanced readers would go to the younger grades to read stories.

Gratitude. After every presentation, my gifted scholars would design and write thank you cards to the presenters. As they were drawing, I would play our Pueblo songs and would explain to my scholars that the songs are prayers asking for rain, for moisture, for the continuance of life.

Family Oriented. Many of my scholars came from homes in which they still lived with their grandparents. In our Native communities we take care of our elders. Our school recognized and valued including the grandparents in our school events and activities. I had bumper stickers made that read, "I am a proud grandmother. My grandchild attends IES."

Fortunately, the Elderly Center was next door to the school, so once a week my gifted scholars and I would go have lunch with them. The elders would tell stories of what it was like when they were growing up.

Humor. Humor is important in our Pueblo culture. Clowns are an intricate part of some of our religious and social dances. These are sacred roles in our communities. Not just anyone can be a clown. Their role is to remind of us the importance of laughter and lightness in the activities of

our daily lives. As often as possible, I tried to bring humor into my lessons. I would read coyote trickster stories. My scholars would write jokes or limericks that could be read during the school's morning announcements.

Giving/sharing. In our Pueblo culture and in most Native tribes we have ceremonies that evolve around giving and sharing. During our social (open to the public) ceremonies we invite people to our homes to eat. On Governor's Feast Day, relatives and friends of the newly appointed officials throw food (fruits, vegetables, boxed items) to the people to show honor and respect to the position and to the individual holding the appointed positions.

Giving/Sharing in the gifted program was emphasized and important. I continually stressed to my gifted scholars the importance of sharing their knowledge and talents. The gifted scholars designed and put on plays. We not only performed the plays for the parents and grandparents, but we also put on performances at other local schools and at the National Indian Education Conference in Albuquerque.

The artistically gifted scholars did paintings that were hung at the Elderly Center and a grocery store in Albuquerque. Some scholars also painted a mural at the Elderly Center; others did clay tiles that became part of a mural at the Recreation Center and another mural along a boulevard in Albuquerque.

Leadership. After I had surveyed the community and using the BIA gifted guidelines, I started to identify gifted and talented students at Isleta Elementary School. One of the criteria areas of the BIA gifted guidelines is "Leadership." I developed a leadership checklist by which staff and students were able to identify students in each classroom who they felt possessed leadership skills (e.g., excellent problem solver, good speaking skills, good communicator or listener, a good mediator, involved in community activities). The leadership checklist results and interviews with students were then presented and reviewed by the CAP Board of Directors. The selections were made.

Recognizing our Native American value of cooperation, and to further develop the gifted scholars' leadership skills, I bought a karaoke machine and together we would sing songs. This helped to develop their speaking skills, self-confidence, and reading ability. It was always a great delight when a once-quiet scholar would ask to sing a song by him or herself.

I provided opportunities as often as possible for my upper grade gifted scholars to assist the kindergarten or first grade teachers. They were instructed in assisting teachers in fire drills and other emergency drills.

I took my gifted scholars on field trips to the Governor's office to meet the tribal leaders. The Governors always took time to meet with the scholars and share with them what qualities it takes to be a Pueblo leader.

Going to the Mat—And Winning

One of the hazards of being a teacher is you are at the mercy of whomever is your principal or administrator. In the 17 years I worked at Isleta Elementary I worked with 19 different principals or acting principals. A few were outstanding administrators and with others I had to fight for my gifted program funds and/or my program activities or events.

I had one principal who wanted to use a large portion of the g/t funds to purchase physical education equipment and a small bus. As the coordinator/teacher of the gifted program, it was also my responsibility to maintain a record of the gifted program finances. I went to my CAP (Creativity Abounds Program) Board of Directors (minus my principal) and they gave me permission to go to the school board to inform them of what he was trying to do. He wrote me up for "going over his head" and my colleagues on the CAP Board of Directors got reprimanded. I stopped him from misappropriating the funds, however, and after that I refused to meet with him without my union representative.

Going to the Mat—No Mat

One Acting Principal, during the summer, changed all the teaching positions. We returned to school to find we had new teaching positions. For example, the 6th grade teacher was moved to kindergarten, the kindergarten teacher to 2nd grade, and so forth. She moved me to 2nd grade! I was required to dismantle the CAP. She had the maintenance staff distribute the CAP computers to the other classrooms. All materials/workbooks/art supplies were also redistributed. I had no say. We all took it to the school board and it took the whole year and her being removed and replaced to get the CAP program back. Sadly, though, I was never able to relocate some of the CAP computers and equipment.

Several years later, they hired a new principal who did not believe in gifted education. I don't know if the school board knew that when they hired him. So, I ended my teaching experience at Isleta Elementary in the 5th grade classroom. Little did the school board or my scholars know that I was still implementing my gifted teaching strategies as I challenged my students to do and be their best. Every day, after the Pledge of Allegiance, we recited my class motto and pledge, which promotes community excellence:

Good, Better, Best, Never Let It Rest,
Till the Good is Better and the Better is Best (community excellence);
I pledge to do my best at all times, and to act in a way that I will be proud of myself and others will be proud of me too.

What an Honor

If you are fortunate to work for a Bureau of Indian Education (BIE) school you will be working exclusively with Native American, Alaskan Native, or Hawaiian Native children. What an honor! What a privilege!

What you will soon learn is family, for a Native American child, includes not only their immediate biological family, but includes uncles being referred to as grandpas, aunts as grandmas, cousins as brothers and sisters. It can also include calling clanship relatives as moms, dads, grandpas, grandmas, sisters, and brothers.

You will learn traditional ceremonies of passages of life, ceremonies for healing/curing and well-being will often take priority in your Native scholar's education and may be causes for absenteeism from the classroom. It is not that the family does not value "White man's" education, it is for the continuance of culture.

You will learn all tribes are different and have different ceremonies and in some cases, languages, and that it is important to know the differences. A Navajo is very different from a Sioux or a Pauite or a Pueblo.

You will learn that some Native children have never grown up on a reservation and there are others who have never left the reservation. But regardless of their chosen residence, most Native American gifted children will be proud of their tribal identity.

You will learn that some Native American gifted children will not want to be identified as gifted, as this will bring attention to them and separate them from the others, which could cause disharmony or discord as it comes in conflict with their Native cultural value of group or community cohesiveness.

What I Wish I Had Known When I First Started Teaching Gifted Native American Children

I wish I had known ...

...that there were principals and administrators who did not believe in gifted education. I thought principals were taught to meet the needs of all their students.

...that there was such a thing as "being overqualified."

...that preparation for standardized testing that emphasizes reading and math takes top priority over science, social studies, and art. I often felt like I had to "sneak" these subjects into my lessons.

...that many more Native children than I realized move from household to household during the week. I found this to be especially true on the Navajo reservation. This movement often resulted in lost books and homework assignments. You have to be patient and accommodating.

...that once my g/t scholars transferred to a New Mexico public school, they would not be considered "gifted" any longer because the BIA gifted guidelines did not require an IQ test to qualify for gifted unless the student was being referred for intellectually gifted.

Sadly, there are very few children of color identified as gifted in the state of New Mexico. I was invited to be part of a New Mexico State Task Force on Gifted Education in 2005 to make revisions to the New Mexico gifted guidelines. I fought for an identification process that would be less contingent on an IQ measure and be more inclusive. I felt my words fell on deaf ears. I felt like I was back at Wellesley College. I was the only Native American on this committee and, from what I remember, the only person of color.

The definition has undergone several revisions, but in the state of New Mexico, a gifted child is still defined as a school-age person whose intellectual ability paired with subject matter aptitude/achievement, creativity/divergent thinking, or problem-solving/critical thinking meets the eligibility criteria. Applying this definition requires culturally diverse students to get "additional documentation" if the "multidisciplinary team" (which

is often made up of non-Native American educators) believes a student's intellectual ability (IQ) test score was depressed due to cultural or linguistic differences, disadvantaged socioeconomic status, or handicapping conditions. Personally, I feel the New Mexico gifted identification process is racially discriminatory. It's like saying, "Oh, poor Indian kid, he didn't score well because he lives on the reservation with his grandparents. Let's give him more Anglo-developed tests."

One last thing I wish I had known is that you have to be willing to fight for your gifted Native American students to be 1) identified and 2) provided a quality gifted education that gives due respect and dignity to their Native American culture. Sometimes I am in total awe and amazement that our tribes still exist. We are a strong, powerful, proud people.

Charmaine L. Shutiva is a proud Native American woman from Acoma Pueblo, New Mexico. She earned her BA from Wellesley College, her MA from New Mexico State University, and her Ph.D. from Texas A&M University. Her dissertation was titled, "Creativity Differences Between Reservation and Non-reservation Native American Students."

Dr. Shutiva taught gifted education courses at Oklahoma City University and Northern Arizona University. She has 32 years of experience teaching and/or counseling Native American scholars at Sky City Community School on the Acoma Pueblo reservation, Isleta Elementary School on the Isleta Pueblo reservation and To'Hajiilee Community School on the To'Hajiilee Navajo reservation.

She is married to Ron D. Shutiva, former Governor of Acoma Pueblo, and has one daughter, Anatheia L. Chino.



Interview

Committed to Helping Gifted Individuals Thrive: An Interview with Dr. Edward R. Amend

Edward R. Amend, Psy. D. 
Interviewed by Tracy L. Cross, Ph.D. 

Tracy L. Cross, Ph.D. spoke with Edward R. Amend, Psy.D., a clinical psychologist who specializes in working with gifted individuals, about his life and experience in the field. Amend has written frequently about the psychological characteristics and needs of this special population and is co-author of *A Parent's Guide to Gifted Children* and *Misdiagnosis and Dual Diagnoses of Gifted Children and Adults: ADHD, Bipolar, OCD, Asperger's, Depression, and Other Disorders*.



Dr. Edward R. Amend

Cross • Please tell us about yourself. Where did you grow up? Where did you go to college? Tell us about your professional life. How did you get interested in serving students with gifts and talents?

Amend • I grew up in Uniontown, a small town in southwestern Pennsylvania, where my parents were self-employed. My dad spent time in the

Army and returned to work in a local factory while putting himself through watch-making school via correspondence courses. He became a certified watchmaker with a degree from the Chicago School of Watchmaking without ever venturing outside of PA. He opened a watch repair shop, and my mother did the bookkeeping for the store, which eventually became three stores in the area. My dad's hobbies were circus- and carnival-related, and I grew up working at festivals and fairs, making and selling (and eating) cotton candy, sno-cones, and popcorn, among many other things. I learned early on what hard work was, and I believe these experiences shaped my life and helped me develop good work habits at a young age.

Neither of my parents went to college, but they expected their three children to attend, and we all earned advanced degrees. I did my undergraduate work at Saint Vincent College (SVC), in Latrobe, PA, a small town often best known for being the original home of Mr. Rogers, Arnold Palmer, and Rolling Rock beer. I played baseball there, while learning more about hard work from the Benedictines. Guided by great professors and many priests at SVC, I majored in psychology and graduated in 1990. That fall, I found my way to graduate school at the School of Professional Psychology (SOPP) at Wright State University in Dayton, Ohio.

At SOPP, I met my mentor (and later colleague and friend), Dr. James Webb. I worked under his supervision at a clinical practicum in the Supporting Emotional Needs of the Gifted (SENG) program and began to learn about gifted children. His first assignment was to read *Guiding the Gifted Child* (Webb et al., 1989), and it resonated with me. I think he also expected me to read every other book ever written on gifted as well, and I gave it my best shot. While there, I counseled and assessed gifted children and led SENG-Model Parent Groups, all under Jim's watchful eye and Dr. Susan Perry-Dyer's supervision. This is when I knew that I'd like to work with gifted and talented individuals.

I completed my training, earning my Doctor of Psychology degree (Psy.D.) in clinical psychology in 1994. My training involved additional clinical practicums, pre-doctoral internship, and postdoctoral training working with both adults and children in several settings, including state mental health facilities, children's hospitals, and outpatient counseling centers. These experiences gave me different lenses from which to view development of both children and adults—something that later became invaluable to working with gifted individuals and their families.

Once I completed my postdoctoral training in northeast Ohio in 1995, I was searching for a different job and hoping to find something in the gifted field. I was still connected with Jim Webb, who had recently retired from SOPP, and SENG had moved to Kent State University, under the direction of another important Jim in my life—Dr. Jim Delisle. Kent State was near my internship and post-doctoral training, and I had the opportunity to learn more about the educational aspects as well as the social and emotional aspects of giftedness from Jim D.

Having no luck finding a place that was looking to hire a recently licensed psychologist to work in the gifted field, I explored other options. I was very close to accepting a job at an adult correctional facility when an interesting thing happened that changed the direction of my career. Jim Webb knew I was looking for a job, and Jim Delisle had recently learned that Dr. Sylvia Rimm, also in northeast Ohio at that time, was looking to expand her Family Achievement Clinic in Cleveland (FAC). She was losing a therapist and seeking someone to help with

assessment, therapy, and supervision of graduate students.

As it turns out Jim, Jim, and Sylvia ran into each other at NAGC in 1995, and I was hired to start on January 1, 1996 at FAC. I was excited to again work more directly and frequently with gifted students, the focus of the practice. Of course, I had encountered gifted students in the various other settings, but hadn't had the opportunity to work consistently with that population in several years. Learning about and implementing Dr. Rimm's Trifocal Model for reversing underachievement was fascinating. In looking back at my career, I reflect often on all of those who taught me so much throughout my professional journey. I was lucky to have such great mentors!

I spent two years working at FAC before following my soon-to-be wife to Kentucky. An experimental psychologist, she had accepted a post-doctoral research position at the University of Kentucky in Lexington. I could not find a job working with specifically with gifted individuals in Kentucky, and I joined a private practice that worked in schools, assessing special needs students. I hoped to expand the practice to include giftedness. This experience increased my understanding of the educational needs of students with health impairments and learning, behavioral, and emotional disabilities, which proved vital to understanding the needs of twice-exceptional learners. Working with gifted individuals was not a primary focus and I knew I needed a change to make that happen.

Cross • *How would you describe your counseling practice?*

Amend • In 2003, I opened Amend Psychological Services, where I began more consistently working with gifted individuals and families, providing counseling, therapy, and assessment. The practice grew and now includes two psychologists, one licensed psychological associate, and one homeschooling consultant. We occasionally have doctoral students from the University of Kentucky rotate through to gain experience in working with gifted students. With the addition of more services, we are now known as The Amend Group, a comprehensive center for psychological, educational, and gifted services. We continue to assess all special needs students, including gifted and twice exceptional students, provide counseling and therapy for individuals and families, and support the needs of parents and homeschoolers through consultation. Personally, I take an eclectic approach to therapy and intervention, using pragmatic interventions to address concerns based on empirically supported intervention whenever possible.

Cross • *What have you found to be the most common issues that students with gifts and talents bring to your practice? What changes have you seen over the years?*

Amend • These days, anxiety is one of the most frequent challenges, but over the years I have seen my share of underachievement, Attention-Deficit / Hyperactivity Disorder (ADHD), Autism Spectrum Disorder (ASD), and depression as well. The COVID-19 pandemic created tons of uncertainty for all of us, not just gifted people. This ambiguity created anxiety and many parents, now working from home, began to see the challenges gifted students presented to teachers in a classroom. Requests for evaluation surged as the pandemic continued and parents were helping educate their children at home. They peaked as students returned to classrooms amid more uncertainty and the challenges of returning to a new normal.

In the past few years, I had seen many fewer quick referrals for things like ASD and ADHD, with teachers and other referring professionals doing a nice job of triaging to determine whether there really are impairments or whether gifted interventions can be used to alleviate some concerns. I credit this to the increasing awareness of gifted students' educational, social, and emotional needs among teachers and other professionals who work with these students. Independent consultants and organizations like SENG, the National Association for Gifted Children (NAGC), and state gifted associations are reaching more and more, and the virtual platforms that expanded quickly is clearly one of the positives to come out of 2020, as these methods furthered the reach of such organizations. Unfortunately, with many students returning to in-person classrooms after a year of virtual schooling, the number of ADHD referrals in all students, not just gifted ones, has increased sharply in my practice.

Cross • *What topics do you think we can be most effective with in our counseling practice with gifted and talented students?*

Amend • There are empirically based treatments for many of the common presenting issues in counseling or therapy, such as anxiety and depression. Clinicians knowledgeable about giftedness can start with these treatments and adapt them to meet the needs of their individual clients. An understanding of giftedness is imperative to implementing empirically based treatments—in my experience, gifted individuals, as much if not more than others, need to feel understood and accepted. We joke that it only takes one psychologist to change a lightbulb, but that lightbulb must really want to change. With the gifted, a therapist will need to develop a relationship that helps guide the client through the stages of change.

In addition to addressing typical presenting issues like anxiety and depression, counselors and therapists can provide information and resources to the gifted and 2e individual about social and emotional development, educational needs, and personal growth. Knowledge can be a powerful tool for those seeking to understand

themselves. Decreasing the isolation and hopelessness felt in existential depression and increasing social connections by helping gifted individuals find peers are two other areas I believe that we can and must support.

Cross • *What topics are you most concerned about currently?*

Amend • COVID-19 and its on-going impact on gifted students, both educationally and socially-emotionally. 2020 was awful for many and I don't think we'll know the full extent of its effects on gifted students for quite some time. As we are now into 2022, we're beginning to see more effects. The loss, grief, tragedy, daily disruptions, missed educational opportunities, lost peer connections, and family strain hit many of us, and the trauma created still lingers. While the impact was different for each of us, we all felt the pain of 2020 and 2021 in some way.

Outside of the practice of counseling, and into the larger world of giftedness, my biggest concern is the fractured nature of our field. My mentor Jim Webb used to say that if you put three psychologists in a room, you automatically have at least six different opinions. The gifted field is filled with many opinions, as well as many facts, but is somewhat fractured as many bright and intense individuals have different opinions on what's most important. While all have good intentions, many see different priorities or different paths. We don't always agree on what giftedness looks like or what gifted individuals really need. Of course, there are some universal truths, but even those are hard to get the general populace to hear and agree on. There are many more that are debatable. Continuing to explore these is healthy for the field to grow, as long as it is done respectfully. More research, more practice, and more collaboration between groups will help. After all, educators, researchers, and practicing clinicians who work with gifted individuals all have the same goal—to see them thrive.

Cross • *What should everybody know about the social and emotional needs of gifted individuals?*

Amend • I think it is important to understand that there are social and emotional characteristics of gifted people. Those characteristics in and of themselves do not always create needs and, in fact, some of the characteristics can be assets. Needs typically arise when a gifted individual, or a system (e.g., family or school or workplace) working with that individual, is unable or unwilling to understand or address the impact of these characteristics.

Of course, the asynchronous or uneven development of gifted individuals, with intellectual and/or academic development often outpacing emotional or physical development, is the most obvious characteristic that does indeed create a need. Educational needs arise when these

students outpace their classmates; social and emotional needs arise when the level of understanding or maturity differs between them and their age peers. Meeting educational needs by accelerating, for example, tends to have positive or neutral effects on social and emotional adjustment, contrary to the popular myth that such interventions have negative effects. Other characteristics, such as intensity and perfectionist tendencies, are also seen among the gifted, and adjustment is more likely positive when one creates or is provided with outlets that accommodate these characteristics.

Cross • *What are common misperceptions about the social and emotional needs of gifted students?*

Amend • One common misperception is that they will be fine on their own. They don't need any special services or opportunities—they'll get it and we don't need to worry about them. Just as an athlete needs coaching to develop and hone their skills, a gifted student needs experts in education to help them grow. Consider where Michael Phelps, Carl Lewis, Serena Williams, or Alex Morgan would be if someone had decided they would be fine on their own. A professional who understands the needs of gifted individuals will provide the support needed to grow and develop potential.

Another misperception is that they all have social skills deficits or simply don't or won't fit in the world. Are there gifted individuals who struggle socially? Of course, there are. Are there any data to show it is a pervasive problem among the gifted? There is not. Sometimes, giftedness is used as an explanation (or excuse) for social skills problems ("Well, he is gifted, you know.") whether or not it actually contributes to the problem. It is important is to identify a social skill problem if it exists, determine its root (e.g., anxiety, lack of skills, lack of connection to peers, dissimilar interests, or even disability) and address the core challenge without assuming it is only related to gifted.

Cross • *As you reflect on your career working with gifted students, what are the most important professional lessons that you have learned?*

Amend • Gifted children and adolescents are, first, kids. They have basic needs like all kids—they need love and support from caring adults. They should be valued for themselves and not for what they do. For them, understanding giftedness and its implications is important, and I work to help them understand giftedness in a way that recognizes it as part of themselves, but not something that defines them. Giftedness cuts through every aspect of one's life and can be a powerful source for good—or not so good—depending on how it's channeled. I think

it's important to help a gifted student put giftedness in its proper place in their life.

Second, there is a false dichotomy at work both in the public view and in some places of the field. The belief that one must work to meet educational needs OR social and emotional needs—not both—comes to the fore in conversation with some parents and professionals. This is simply not true and gifted individuals must be treated and nurtured as a whole person, by helping them address all aspects of themselves, including intellectual, educational, social, and emotional domains.

Cross • *If you were to advise aspiring clinical psychologists about working with gifted individuals, what would you share with them?*

Amend • First, become a good psychologist. Get good training in working with children and adults of all types and in all settings, if possible. I was lucky enough to work in both inpatient and outpatient settings with both children and adults. Working in schools with many types of special needs students has really helped my understanding of 2e students' needs.

Being able to recognize mental illness in children and adults is important and being able to distinguish mental illness from typical behaviors and gifted behaviors can be challenging due to masking, or because some may work to hide it. As a psychologist working with gifted families, you will encounter "problems of living" and severe mental illness, as well as everything in between. Being able to see those differences will allow you to provide the appropriate level of support.

In addition, of course, it's important to cultivate an understanding of giftedness in all its forms. Read as much as you can, spend time observing and interacting with gifted children and adults, go to conferences like NAGC and SENG, and talk with experts in the field. Most of us love what we do and are happy to share, because there aren't enough of us. Incorporating this understanding into your daily work will be necessary to working well with this population.

Psycho-education is an important part of working with gifted individuals. Sometimes they need information and support as much as treatment for mental health concerns. While there are no "empirically supported" treatment protocols for gifted people, there are empirically supported treatments for depression and anxiety, for example. Knowing those, combined with an understanding of giftedness, will allow you to provide quality services to this population. But, warmth and genuineness are also important because it is true that, as the cliché states, many people don't care how much you know until they know how much you care.

Cross • *Given that most doctoral programs in psychology do not offer formal training in gifted education, giftedness, gifted psychology and so forth, how should we prepare psychologists to work with students with gifts and talents?*

Amend • I believe we must help both undergraduate and graduate level psychology and social work students understand that gifted children and adults actually may have problems, so they don't fall into believing the myth I mentioned earlier that they will do fine on their own. Part of this is on those who run graduate programs, but part of this also falls on those practicing. Find ways to bring graduate students into your practices, by allowing them to at least shadow and observe your work or provide supervision for clinical work with gifted students. If you have knowledge to share, volunteer to present to graduate students at local universities about what gifted students need. While not all will be open to the information, reaching one can make a significant difference in the lives of many.

For those already in university settings, many of you are likely housed in education departments. Consider crossing into different departments, including graduate clinical or counseling programs, or even undergraduate psychology departments, to teach courses or at least guest lecture in classes to begin to raise awareness about gifted issues. I've always said that we "in gifted land" are really good at "preaching to the choir" and need to do a better job of teaching others outside the field to make the most difference. Find ways to do that. There are many creative people in this field and, surely, they can find other ways to get accurate information out as well. We all have a responsibility to get good information out because a little knowledge can ripple quickly.

Cross • *What have I not asked you that you would like to share with us?*

Amend • Giftedness and its associated characteristics can help explain why gifted individuals feel different, act differently, or view things from unusual perspectives. Recognizing the giftedness allows us to provide appropriate interventions to address the characteristics and needs of gifted children and adults. However, giftedness should not be used as an excuse for inappropriate behavior resulting from it. For example, if a gifted child is very high energy but does not have ADHD, we can explain the behavior as possibly related to giftedness, intensity, or psychomotor overexcitability, but we should also take steps to address it, rather than downplaying the impact as a part of giftedness. One's adjustment is built upon accurate understanding of oneself and an ability to address the challenges that arise along the way.

References

Webb, J. T., Meckstroth, E. A., & Tolan, S. S. (1989). *Guiding the gifted child: A practical source for parents and teachers*. Great Potential Press.

Related Readings

Webb, J. T., Gore, J. L., Amend, E. R., & DeVries, A. R. (2007). *A parent's guide to gifted children*. Gifted Unlimited.

Webb, J. T., Amend, E. R., Beljan, P., Webb, N. E., Kuzujanakis, M., Olenchak, F. R., & Goerss, J. (2016). *Misdiagnosis and dual diagnosis of gifted children and adults: ADHD, bipolar, OCD, Asperger's, depression, and other disorders* (2nd ed.). Gifted Unlimited.

Edward R. Amend, Psy.D. is a clinical psychologist at The Amend Group, a comprehensive center for psychological, educational, and gifted services in Lexington, Kentucky. Dr. Amend is licensed to practice in both Kentucky and Ohio, where he focuses on social, emotional, and educational needs of gifted, twice-exceptional, and neurodiverse youth, adults, and their families. He has worked in private practice and community mental health settings, and consulted with clinics, hospitals, schools, and other organizations.

Dr. Amend is co-author of two award-winning books: *A Parent's Guide to Gifted Children*, and *Misdiagnosis and Dual Diagnoses of Gifted Children and Adults: ADHD, Bipolar, OCD, Asperger's, Depression, and Other Disorders* (Second Edition). Dr. Amend has authored or co-authored a number of articles, book chapters, and columns about gifted children. He presents nationally and internationally about gifted children, and his service has included various roles with NAGC, SENG, and *The G WORD* film's Advisory Board.

