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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 (elementaryschool 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 wellbeing (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 wellbeing (Overholser, 1992; Nezlek 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 IO 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 $lpha$
Creative Engagement	4	.88
Creative Cognitive Style	4	.81
Spontaneity	4	.83
Tolerance	4	.80
Fantasy	4	.76
Extraversion	8	.88
Agreeableness	9	.80
Conscientiousness	9	.83
Neuroticism	8	.86
Openness to Experience	10	.83
Self-Oriented	15	.91
Other-Oriented	15	.82
Socially Prescribed	15	.86
	Creative Engagement Creative Cognitive Style Spontaneity Tolerance Fantasy Extraversion Agreeableness Conscientiousness Neuroticism Openness to Experience Self-Oriented Other-Oriented	Creative Engagement 4 Creative Cognitive Style 4 Spontaneity 4 Tolerance 4 Fantasy 4 Extraversion 8 Agreeableness 9 Conscientiousness 9 Neuroticism 8 Openness to Experience 10 Self-Oriented 15 Other-Oriented 15

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

Questionnair	re Item Rota	ted 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	es71
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 n	ow61
	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)

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

^{**}Kaiser-Meyer-Olkin statistic = .74; Maximum Likelihood χ^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%

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 $lpha$	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, Consciousness, 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 <i>R</i> 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)

			•									
	Der Gifte	Denying Giftedness	Res Pop	Resisting Popularity	L. Ac	Activity Level	∓ ⊂	Using Humor	P, Accel	Peer Acceptance	O H	Helping Others
	Std. Coeff. eta	Sig	Std. Coeff. eta	Sig.	Std. Coeff. eta	Sig.	Std. Coeff. eta	Sig.	Std. Coeff. eta	Sig.	Std. Coeff. eta	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 selfdoubt 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 selfacceptance can contribute to psychological well-being (Garcia et al., 2014).

In looking at findings related to the various types 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-thespot" 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,

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.

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