The Relationship of **Perfectionship** of to Affective Variables in Gifted and Highly Able Children



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How does perfectionism relate to gifted and high-ability learners?

Does the presence of perfectionist tendencies lead to more serious emotional issues or does it support enhanced achievement? Parents, educators, and gifted learners themselves often consider these issues as they deal with the ramifications of such perfectionist tendencies. This study focused on exploring perfectionism and its relationship to social, emotional, and academic issues for gifted and highly able learners.

Since the studies of Hollingworth (1926, 1942), researchers have discussed social-emotional characteristics along with the resulting issues and problems of gifted children. However, little research has been done on the aspects of perfectionism and its relationship to affective variables in gifted and highly able children.

Research presents conflicting views of social-emotional characteristics of gifted learners (Janos & Robinson, 1985; Moon & Hall, 1997; Moon, Kelly, & Feldhusen, 1997; Neihart, 1999; Silverman, 1993). "Some studies suggest that these children are highly motivated, well-adjusted, socially mature, open to new experiences, independent, and possess high self-concepts and a high tolerance for ambiguity" (Keiley, 2002, p. 43). In contrast, other studies support the idea that giftedness accompanies a tendency to develop social-emotional difficulties, such as social isolation and loneliness, which may lead to depression, anxiety, phobias, and interpersonal problems (Jackson, 1998; Kaiser & Berndt, 1986; Piechowski, 1997; Silverman, 1993).

Popular thought supports the idea that depression and suicide occur at higher rates in gifted individuals than the rest of the population, but research studies have not confirmed that belief (Neihart, Reis, Robinson, & Moon, 2002). Gifted students remain undistinguishable from average students in levels of depression or suicidal ideation (Baker, 1995; Cross, 1996; Cross, Gust-Brey, & Ball, 2002; Neihart et al., 2002). Several writers have linked characteristics of gifted children to risk factors for depression, perfectionism, and anxiety (Greenspon, 2000; Orange, 1997; Parker & Adkins, 1995; Schuler, 2000). Based on such claims, Roeper (1995, 1996) advocated that educators should work on understanding the whole gifted person, including social-emotional issues, rather than merely academic concerns. The Teaching for Intellectual and Emotional Learning (TIEL) model espouses connecting cognitive and social-emotional components in educational programming for gifted children (Folsom, 2006). More research is needed to clarify the relationship between perfectionism and affective variables in the gifted population and to aid educators who work with gifted students struggling with these issues in developing effective responses to their perfectionist tendencies. Self-Oriented Perfectionism (SOP) is characterized by exacting standards set for one's self. This subtype exhibits a healthy component that may propel one toward higher levels of effort and achievement. Socially Prescribed Perfectionism (SPP) represents internalization of the perceived perfectionistic expectations of significant others in one's life.

The complex construct of sensitivity, intensity, and perfectionism produces common characteristics and counseling concerns for gifted children and adolescents (Webb, Meckstroth, & Tolan, 1982). Research relating the constructs of perfectionism to gifted individuals supports three conclusions: (a) perfectionism may result in pathological problems; (b) perfectionism in gifted individuals may contribute to

high achievement; and (c) attributions of perfectionism fall along a range of continuums (Adderholdt-Elliott, 1991; Ford, 1989; Hollingworth, 1926; Karnes & Oehler-Stinnett, 1986; Lovecky, 1994; Roeper, 1982; Silverman, 1990). Research has suggested that perfectionism is best understood as a multidimensional concept (Enns & Cox, 2002).

Pathological Aspects of Perfectionism

Several studies focus on the pathological aspects of perfectionism; therefore, some researchers have viewed perfectionism in a negative perspective. Perfectionists "strain compulsively and unremittingly toward impossible goals and measure their own worth entirely in terms of productivity and accomplishment" (Burns, 1980). Pacht (1984) viewed perfectionism as inherently destructive, causing psychological problems. Adderholdt-Elliot (1991) considered perfectionistic tendencies of the gifted to be based in high standards, birth order, parents, teachers, and peer pressure. Some researchers suggest that unrealistic expectations, such as those centered in perfectionism, can lead to stress, anxiety, depression, and suicide (Callahan, 1993; Cross, 1996; Cross et al., 2002; Hewitt & Dyck, 1986; Hewitt, Flett, & Turnbull-Donovan, 1992; Huggins, Davis, Rooney, & Kane, 2008; Huprich, Porcerelli, Keaschuk, Binienda, & Engle, 2008; LaPointe & Crandell, 1980). Others suggest that expectations of perfection may lead gifted students to be more anxious and depressed (Thompson & Perkins, 2004) and that both SPP and SOP are associated with depression in both gifted and nongifted students (Hewitt et al., 2002).

In particular, perfectionism that involves excessive self-scrutiny and

the tendency to be overly critical of oneself and focuses on others' perceptions of one's achievement has been associated with depressive symptoms (Dunkley & Blankstein, 2000). This type of perfectionism is also associated with a perceived lack of social support, in which individuals do not effectively seek social support even from their closest friends (Dunkley & Blankstein, 2000; Dunkley, Zuroff, & Blankstein, 2003). It has been proposed that this perceived lack of social support is a maladaptive aspect of perfectionism (Priel & Shahar, 2000). Some studies have suggested that perceived lack of social support is a critical factor in perfectionist individuals' adjustment (Dunkley & Blankstein, 2000; Dunkley et al., 2003) and that socially prescribed perfectionism, in particular, may lead to significant conflict in interpersonal relationships (Hewitt, Flett, & Mikail, 1995). In this same study, Hewitt et al. (1995) concluded that both Other-Oriented and Self-Oriented Perfectionism were associated with low relationship satisfaction. Socially Prescribed Perfectionism has been linked with maladaptive relationship behaviors, such as destructive problem-solving approaches (Flett, Hewitt, Shapiro, & Rayman, 2001). Generally, socially prescribed perfectionism has been linked with maladaptive behaviors (Stoeber, Feast, & Hayward, 2009). Hewitt and Flett (2004) have linked socially prescribed perfectionism with affective variables such as anxiety and depression. Huggins et al. (2008) found that socially prescribed perfectionism was a significant indicator of depression for preadolescents. Other researchers have found a tendency in some perfectionists toward neurotic coping strategies that lead to dysfunction, social anxiety, and poor health (Biran & Reese, 2007; Laurenti, Bruch, & Haase, 2008; Pritchard, Wilson, & Yamnitz, 2007; Stoltz & Ashby, 2007).

Perfectionism Resulting in Achievement

Some theorists suggest that gifted students may tend to have perfectionist strivings that result not necessarily in frustration, but in the healthy pursuit of achievement (Enns & Cox, 2002; LoCicero & Ashby, 2000; Parker, 2000). "In a positive form, perfectionism can provide the driving energy that leads to great achievement" (Roedell, 1984, p. 127). American children tend to express perfectionism through healthy achievement rather than academic and personal difficulties (Parker, 2000). The talented artists or musicians work intently to perfect their skills and abilities to produce the best work possible. Scientists work throughout their careers to find the cure for cancer or solutions to environmental problems. A common thread found in eminent scientists was an absorption in their work (Roe, 1970). The drive for excellence leads these gifted individuals to persevere and achieve their ultimate goal. "The most consistent characteristic of creative achievers is enthusiastic devotion to work" (Ochse, 1990, p. 130), which results in the high standards and a drive for excellence found in perfectionism. SOP, which is mainly an internal form of perfectionism, has been associated with conscientiousness, self-esteem, and academic motivation (Hewitt & Flett, 2004; Miquelon, Vallerand, Grouzet, & Cardinal, 2005; Molnar, Reker, Culp, Sadava, & DeCourville, 2006). Recent studies have shown that perfectionists had higher academic achievement, life satisfaction, and pride than their nonperfectionist peers (Must, 2008; Stoeber, Harris, & Moon, 2007; Witcher, Alexander, Onwuebuzie, Collins, & Witcher, 2007).

Range of Attributions of Perfectionism

Perfectionism in the literature has been theorized to be a construct that has multiple dimensions that may have either negative or positive effects on school-aged youth (Gilman, Ashby, Sverko, Florell, & Varjas, 2005). Hamachek (1978) viewed perfectionism as falling on a continuum from normal to neurotic. Normal perfectionists "derive a real sense of pleasure from the labors of painstaking effort" (Hamachek, 1978, p. 27). This healthy type focuses on perseverance, high achievement, and high standards. Neurotic perfectionists are "unable to feel satisfaction because in their own eyes they never seem to do things good enough to warrant that feeling" (Hamachek, 1978, p. 27). This unhealthy type results in frustrating behaviors that possibly lead to psychological and physiological disorders, such as depression (Hewitt & Dyck, 1986), eating disorders (Axtell & Newton, 1993), obsessive-compulsive personality disorders (Rasmussen & Eisen, 1992), suicide (Callahan, 1993: Cross, 1996; Cross et al., 2002), and alcoholism (Frost, Marten, Lahart, & Rosenblate, 1990).

In a study using the Frost Multidimensional Perfectionism Scale (FMPS; Frost et al., 1990), Parker (1997) identified three types of academically talented adolescents: dysfunctional perfectionists, healthy perfectionists, and nonperfectionists. Dysfunctional perfectionists exhibited characteristics of anxiety, social detachment, hostility, and overcompetitiveness. Healthy perfectionists behaved agreeably and were socially well-adjusted, goal-oriented, and not neurotic. Nonperfectionists dealt with narcissistic tendencies and

appeared distracted, disorganized, and undisciplined.

A study conducted by Schuler (2000) supports Hamachek's continuum of perfectionism. Schuler studied gifted adolescents in a rural community using the FMPS. Fifty-eight percent of the participants exhibited perfectionism in a healthy range resulting from a sense of order and organization that helped them achieve their personal best. They attributed their success to hard work, drive for perfec-

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tion, and competition with friends. They considered doing their best as more important than what they produced. Twenty-eight and a half percent of the participants showed a fixation on making mistakes and a constant state of anxiety, which resulted in the neurotic form of perfectionism. Their focus rested in grades rather than doing their best and saw competition with friends in a negative light.

Hewitt and Flett (1991) described three dimensions of perfectionism: Self-Oriented, Other-Oriented, and Socially Prescribed. Results from their study, using their own Multidimensional Perfectionism Scale (MPS) indicated that SOP and SPP accompanied depression and maladjustment in both patients and nonpatients. Self-Oriented Perfectionism

focused on a desire to be perfect, unrealistic standards, and failures, flaws, and shortcomings. SPP emphasized a need to meet exaggerated expectations of the individual that one perceived to be held by others. Although negative psychological problems may correlate to these types of perfectionism, the push toward perfectionism may accompany positive adjustment and achievement (Hamachek, 1978; Hewitt & Flett, 1991). Speirs Neumeister (2004) investigated Hewitt and Flett's (1991) typology of self-oriented and socially prescribed perfectionism in relation to first-year college honor's students' responses to success and failure. Results from the study suggested that socially prescribed perfectionists minimized their successes and maximized their failures, giving external attributions for them. The researchers labeled this pattern as unhealthy, stating that it may correlate with perfectionism and depression. In contrast, self-oriented perfectionists took pride in their success and attributed that success to their own abilities and hard work. When failure occurred, they made realistic attributions that were situation specific. This healthy style of perfectionism fueled continued motivation and preserved self-concept.

Although social-emotional issues have commonly been linked to perfectionism in gifted individuals, empirical studies suggest that perfectionism exists in a population that includes a range of abilities (Parker, 2000). Gifted children or children with high academic ability are not at a greater risk for being perfectionists (Neihart, 1999; Nugent, 2000). "For a minority of gifted adolescents, perfectionism is a destructive force with detrimental consequences while for most it is a healthy aspect of their lives resulting in positive growth" (Schuler, 2000, p. 190). Some empirical research suggests that gifted children who exhibit perfectionism may demonstrate healthy achievement rather than maladjustment (Ablard & Parker, 1997; Dweck, 1986; Dweck & Leggett, 1988; Heyman & Dweck, 1992; Parker, 1997).

Empirical knowledge about perfectionism and its connection to the gifted population is limited at best. Few studies have focused on perfectionism in gifted children and adolescents (Baker, 1995; Orange, 1997; Parker, 1997; Schuler & Siegle, 1994). Participants in one study of high school students that held high standards evidenced higher grade point averages and showed lower scores on measures of depression and self-esteem (Accordino, Accordino, & Slaney, 2000). Gilman and Ashby (2000) studied the effect of perfectionism on middle school students and found similar results to Accordino et al.'s (2000) study. A study by Dixon, Lapsley, and Hanchon (2004) examined the relationship of perfectionism to psychiatric symptoms, adjustment, self-esteem, and coping in a sample of gifted high school students. They found that some features of perfectionism, "such as organization and high personal standards (and parental expectations), could be cultivated to promote academic and personal adjustment in adolescents" (Dixon et al., 2004, p. 105). More recently, researchers who have examined perfectionism in students with a range of abilities have found that gifted students are no more likely to evidence signs of perfectionism than their nongifted or disabled peers (Greenspon, 2008; O'Brien, 2006). These conclusions lead to the suggestion that additional research with gifted children and adolescents could provide evidence demonstrating the effect of perfectionism on achievement and social-emotional well-being.

Purpose of Study

The purpose of this study was to explore the relationship between the perfectionism orientation of gifted and highly able children with the affective areas of depression, anxiety, and perfectionism. It was hypothesized that Socially Prescribed Perfectionism (SPP) would be positively correlated with depression levels in the gifted child and adolescent sample. It was also hypothesized that anxiety levels in the gifted child and adolescent sample would be positively correlated with SPP. Given the inconsistency in findings regarding anxiety and perfectionism, particularly in the gifted population, it was also hypothesized that Self-Oriented Perfectionism (SOP) would be negatively correlated with anxiety levels in the gifted child and adolescent sample.

Methodology

This study occurred during a 2-week summer enrichment program for gifted children. This program occurs each summer at a small, private university in a rural community in Texas. Teachers in this program hold graduate degrees in gifted education. The summer enrichment program serves as a culminating practicum experience for graduate students who are completing their master's degree in gifted education at the university in which the gifted program is housed. The program provides higher level thinking and creative problem solving experiences that are often not available to students in their local school programs. Directors of the program keep costs to a minimum and provide scholarship opportunities, allowing gifted children and adolescents from diverse socioeconomic status levels to participate in the camp.

Participants

The participants in this study consisted of 240 children between the ages of 7 and 14 years. Gender of participants included 58% male and 42% female. Self-identified ethnicity fell into seven categories: Caucasian (76%), Hispanic (9%), Asian American (4%), Indian/Pakistani (2.4%), Native American (1.2%), African American (1%), and Other (6.4%).

All participants were identified as gifted by one of two criteria: They had previously been identified and served through their school's program for gifted and talented children/youth or they were tested by the program staff using standardized group intelligence instruments and scored within the 90th percentile on the composite score of ability. Those students previously identified as gifted met the identification qualifications outlined by their local school district. According to the Texas Education Agency's (2000) Texas State Plan for the Education of Gifted/ Talented Students, local school districts must design their own identification system for students to enter their gifted program. The system must include multiple assessment criteria, including both objective and subjective measures, such as group administered ability (IQ) tests and achievement tests, teacher inventories, parent inventories, portfolios, and grades. If students had not been previously identified in their local school district, individual ability/ reasoning tests and an informal parent inventory were administered. The ability tests used for identification included the Wechsler Primary and Preschool Scale of Intelligence (Wechsler, 2002), and the Test of Nonverbal Intelligence, Third Edition (Brown, Sherbenou, & Johnsen, 2006).

Instruments

Researchers administered three assessments to participants in the study: Children's Depression Inventory (CDI; Kovacs, 1983), Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1978), and Child and Adolescent Perfectionism Scale (CAPS; Hewitt, Flett, & Turnbull, 1994). Children took the assessment in a classroom group setting. All instruments were administered as required by the manual.

The CDI (Kovacs, 1983) measures symptoms of depression through a 27 item self-report instrument. Each item consists of three statements. For each item, the individual is asked to select the statement that best describes his or her feelings for the past 2 weeks. Subscales include Negative Mood, Interpersonal Problems, Ineffectiveness, Anhedonia, and Negative Self-Esteem. On the CDI, Negative Mood is defined as feeling sad, crying, worrying about "bad things," being bothered or upset by things, and being unable to make up one's mind. Interpersonal Problems are defined as problems/difficulty in interaction with people, trouble getting along, social avoidance, and social isolation. Ineffectiveness is defined as negative evaluation of one's ability and school performance. Anhedonia is defined as "endogenous depression" including impaired ability to experience pleasure, loss of energy, sleep/ appetite problems, and sense of isolation. Negative Self-Esteem includes feelings of low self-esteem, self-dislike, lack of love, and suicidal thoughts. The intended age range for using the CDI is 7 to 17 years of age. Several studies have demonstrated good internal consistency for the CDI, ranging between 0.83 and 0.94 (Saylor, Finch, Spirito, & Bennett, 1984).

The RCMAS (Reynolds & Richmond, 1978) measures symp-

toms of anxiety through a 37 item self-report instrument that requires a yes or no answer to specific questions. Subscales include Physiological Anxiety, Worry/Oversensitivity, and Social Concerns/Concentration. On the RCMAS, Physiological Anxiety is defined as the index of a child's expression of physical manifestations of anxiety. Worry/Oversensitivity items contain the word "worry," and suggest the person is afraid, nervous, and in some manner oversensitive to environmental pressures. This scale measures the internalization of anxiety. Social Concerns/Concentration are defined as concern about self vis-à-vis other people or express some difficulty concentrating, and feel unable to live up to expectations of other significant individuals in their lives. The age range for the RCMAS is 6 to 19 years. Test-retest reliability coefficients range from .66 to .67 at 9 months, with an internal consistency coefficient of .85.

The CAPS (Hewitt et al., 1994) is a 22-item self-report instrument that has two subscales, Self-Oriented and Socially Prescribed Perfectionism. This is a downward extension of the Multidimensional Perfectionism Scale (MPS; Hewitt & Flett, 1991). Participants endorse items in relation to how they view them as true for themselves, such as, "I try to be perfect in everything that I do." On the CAPS, SOP is characterized by exacting standards set for one's self. This subtype exhibits a healthy component that may propel one toward higher levels of effort and achievement. SPP represents internalization of the perceived perfectionistic expectations of significant others in one's life. The age range for the CAPS is 6 to 16 years. Good internal consistency and adequate testretest reliability have been reported (Castro, Gila, Gual, Lahortiga, Saura, & Toro, 2004).

Procedure

At the beginning of the study, researchers provided consent forms for parents to sign and return in order for their children to participate in the study. Ninety-six percent of the parents of all of the students participating in the camp granted permission for participation and all of these students participated. At the beginning of each day on the second, third, and fourth days of camp, children were administered the instruments by graduate students. Each administration took approximately 15 minutes to conduct. The instruments were administered in the following order: CAPS, CDI, and RCMAS.

Results

Descriptive statistics were gathered that indicated that, on the CAPS, more of the students in the current study rated themselves as exhibiting behaviors and feelings consistent with SOP than with SPP, with 43.5% of respondents rating themselves as exhibiting characteristics of SOP and 14.6% of respondents rating themselves as exhibiting characteristics of SPP.

A correlational analysis was conducted in order to evaluate the extent to which participants' ratings of their own perfectionism and their symptoms related to depression and anxiety were related. A traditional Bonferroni adjustment was made to reduce type I error, adjusting the p value from p <.05 to p < .007.

Researchers calculated a Pearson correlation coefficient between SPP and the CDI Depression scale (M =39.256, SD = 4.682). The resulting correlation was r = .206, a modest positive relationship that was significant at the .007 level (p = .003) and accounted for 30% of the variance. A

Table 1 Correlations Among Types of Perfectionism and CDI Depression Scores

Type of perfectionism	Depression totals
Socially Prescribed Perfectionism (SPP)	.206*
Self-Oriented Perfectionism (SOP)	.097

* p < .007 for all analyses. CDI = Children Depression Inventory.

Table 2 Correlations Among Types of Perfectionism and RCMAS Anxiety Scores

Type of perfectionism	Anxiety totals
Socially Prescribed Perfectionism (SPP)	432*
Self-Oriented Perfectionism (SOP)	334*

* p < .007 for all analyses. RCMAS = Revised Children's Manifest Anxiety Scale.

Pearson correlation coefficient was also calculated between SPP and the subscales of the CDI. The resulting correlation for the Anhedonia subscale (M = 12.126, SD = 2.151) was r = .195, a modest positive relationship that was significant at the .007 level (p = .004) but accounted for only 4% of variance. The results of this analysis are consistent with expectations in that SPP was positively correlated at a statistically significant level with depression. It is interesting to note that modest relationships that were statistically significant were also found between SPP and the Anhedonia subscale of the CDI. Researchers also calculated a Pearson correlation coefficient between SOP and the CDI Depression scale. The resulting correlation was r = .097, which was not statistically significant (p = .169). Correlations are shown in Table 1.

In addition, a Pearson correlation coefficient was calculated between SOP and the RCMAS Anxiety scale (M = 16.807, SD = 6.414). The resulting correlation was r = -.334, a modest negative relationship at the .007 level (p = .000) of significance that accounted for 12% of the variance. Correlations were also computed

between SPP and the RCMAS Anxiety scale and subscales. The resulting correlation for the Anxiety scale and SPP was r = -.432, a moderately negative relationship at the .007 level (p = .000) of significance accounting for 19% of the variance. Correlations are shown in Table 2.

No other statistically significant correlations were found between types of perfectionism and affective areas measured. These findings were consistent with our expectations in that SOP was negatively correlated in a statistically significant way with anxiety. However, the findings were not consistent with our expectations in that the statistically significant relationship that was found between SPP and Anxiety was in the negative direction. Although none of the correlations' coefficients were above .50 and were considered modest, they were powerful due to the size of the sample, showing significant trends.

Discussion

Three features of the results of this study are particularly important: (a) the positive correlation between depression and socially prescribed or externally derived perfectionism; (b) the positive correlation between specific aspects of depression, such as physiological symptomology and socially prescribed or externally derived perfectionism; and (c) the negative correlation between anxiety and both self-oriented/internally and socially prescribed/externally derived perfectionism.

The relationship between Depression and SPP was confirmed in the gifted population and has been found in other samples (Hewitt et al., 2002; Stoeber et al., 2009; Thompson & Perkins, 2004). This finding, while replicating others in some ways, is important in that this study used a relatively large rural sample of gifted students, which represents a different population than has been represented in previous studies. These results support the research that suggests that perfectionism exists in a population that includes a range of abilities (Parker, 2000) in that they are the same as those found in other populations (Hewitt et al., 2002; Thompson & Perkins, 2004). These findings are consistent with research that suggests that expectations of perfection may lead students to be more depressed (Callahan, 1993; Hewitt & Dyck, 1986; Hewitt et al., 1992; LaPointe & Crandell, 1980, Thompson & Perkins, 2004; Stoeber et al., 2009). It also confirms the research that suggests that particular types of perfectionism may lead to unhealthy emotional development (Biran & Reese, 2007; Hamachek, 1978; Laurenti et al., 2008; Pritchard et al., 2007; Schuler, 2000; Stoltz & Ashby, 2007).

In this sample of gifted students, those who rated themselves as having high levels of socially prescribed perfectionism also rated themselves as having high levels of depression, in particular those symptoms involving anhedonia. The fact that this specific aspect of depression, which involves physiological symptoms of depression,

was linked in this sample with SPP is interesting. These findings suggest that not only general symptoms of depression but particular manifestations may be linked with perfectionist tendencies that arise from external expectations.

In contrast to findings in other studies (Thompson & Perkins, 2004), the positive relationship between Anxiety and SPP was not confirmed in this study. It may be that this is due to the fact that the study was conducted during the summer months and while subjects were participating in an activity that they elected to attend. Subjects may have been less anxious than they would have been during the academic school year when required to participate in particular subject study and activities not of their own choosing.

Some limitations to this study were present. One limitation related to the fact that the population used in this study included students who scored in the 90th percentile and above on ability and achievement tests. Most school programs developed for gifted and talented students serve gifted students functioning in the 95th percentile or above on identification measures. Therefore, the population of the current study may not represent populations served in all gifted education programs. Another limitation resulted from the fact that the instruments used in this study were self-report instruments, which rely on the subject to report his or her own thoughts and feelings. The results of self-report instruments may not be reliable if the subjects involved do not report truthfully.

Conclusions

The findings from this study provide additional insights into the relationship between perfectionism, depression, and anxiety in gifted stu-

[A] combination of challenge and realistic expectations allows students to experience intellectual challenge as a positive learning experience rather than something to be avoided.

dents. Because the study analyzed data correlationally, no assumptions of causality can be assumed. Therefore, researchers do not conclude that perfectionism causes depression or that perfectionism reduces incidence of anxiety. Participants who showed a tendency for socially prescribed perfectionism also showed characteristics of "endogenous depression" involving difficulty experiencing pleasure, loss of energy, sleep/appetite problems, and sense of isolation. Participants exhibiting high levels of both self-oriented and socially prescribed perfectionism expressed low levels of anxiety.

These results support Hewitt and Flett's (1991) thesis that perfectionism exists on a continuum and that while some types of perfectionism (SPP) tend to occur with depression, it may also be negatively correlated with levels of anxiety. These data regarding tendencies toward depression support previous studies suggesting that perfectionist tendencies are linked to depression in gifted students (Callahan, 1993; Hewitt & Dyck, 1986; Hewitt et al., 1992; Hewitt et al., 2002; LaPointe & Crandell, 1980). The results about feelings of anxiety do not support previous studies and literature reviews suggesting that perfection correlates to anxiety in gifted students (Greenspon, 2000; Neihart et al., 2002; Schuler, 2000; Thompson & Perkins, 2004).

Although results from this study cannot be generalized to the larger population of gifted individuals, they

do suggest several implications for home and school. They suggest that parents and teachers focus on providing gifted students with realistic expectations while offering a consistent level of challenge in the early grade levels. This combination of challenge and realistic expectations allows students to experience intellectual challenge as a positive learning experience rather than something to be avoided.

These findings indicate that perfectionism may not necessarily be anxiety provoking for gifted students. Students who evidence tendencies toward perfectionism should be encouraged to be aware of their own levels of anxiety and to understand when they may be putting too much pressure on themselves. This approach allows children the opportunity to use their perfectionist tendencies to excel while providing them with guidance regarding potential anxiety.

The results of this study suggest that perfectionist tendencies that focus on external expectations may accompany more depressive symptomology. Students who evidence this type of perfectionism (SPP) should be encouraged to be aware of their moods and to monitor their expectations. It is also important in these circumstances that there be frank communication between the parent, child, and school community regarding the messages that are being sent by others regarding expectations for perfection. Gifted learners who evidence SPP may need

assistance in learning how to communicate their feelings effectively and seek social support when appropriate.

The TIEL model of teaching might be particularly useful in working with these issues. This model espouses observations of students to monitor both intellectual and social-emotional development (Folsom, 2006). Using this method provides teachers of gifted students with a framework from which to observe the child's emotional development in specific areas that may be useful in developing the ability to enjoy challenge rather than becoming overwhelmed by expectations of perfectionism. For example, the TIEL model emphasizes the need for empathy, including caring for oneself, as well as the divergent abilities of flexible thinking and being able to see options. Empathy and specifically learning to care for oneself is important in allowing a child to understand his or her own internal drive for perfection and discriminate this from pressure from others to achieve perfection. Flexibility of thinking and the ability to see options allows the child to develop skills that can benefit him or her in the problem-solving process when faced with the inability to achieve perfection. The teachers of gifted children who struggle with SPP and manifest symptoms of depression might benefit from using the TIEL model to observe the child's skills in these areas and then to design lessons or extensions of lessons that focus on the further development of these skills.

This study suggests several issues that may be examined in future research. The moderate correlations between the specific subscale of the CDI of Anhedonia with SPP suggests that research investigating the relationship between specific sets of depressive symptomology and socially prescribed perfectionism may be helpful in furthering the understanding of the extent of this relationship in gifted individuals in particular. It also suggests that future research studies focus on the usefulness of specific educational models, such as the TIEL model, in aiding in the development of social-emotional learning. GCT

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