

# Addressing Multidimensional Perfectionism in Gifted Adolescents With Affective Curriculum

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*This study investigated the effects of an affective curriculum on multiple dimensions of perfectionism among middle school (grades 6–8) gifted students. A quasi-experimental nonequivalent control group design was employed; all participants (N = 153) completed pre- and posttests of the Goals and Work Habits Survey. The experimental group received affective curriculum consisting of nine 45–50-minute lessons in a gifted classroom for 6 weeks. Among participants with moderate to high levels of unhealthy perfectionism,  $t$ -tests showed the experimental group reported lower scores on Concern over Mistakes than the control group. Results of paired  $t$ -tests further revealed significant decreases in Concern over Mistakes, Doubts about Actions, and Personal Standards among unhealthy perfectionists in the experimental group. Translating multidimensional perfectionism theory into classroom-based interventions was successful in helping students decrease self-critical evaluative tendencies; however, the study showed no evidence of enhancing healthy perfectionism. Future directions and recommendations are discussed.*

In light of the growing emphasis on standards-based reform, gifted students are often pressured by schools, teachers, and parents to display high achievement (Moon, 2006). These students may perceive the message that they are valued for what they do, not for who they are (Silverman, 1997). The improvement of cognitive abilities is often emphasized at the expense of the social and emotional needs of gifted students; yet, a review of related literature suggests that gifted students may be particularly vulnerable to emotional distress, markedly during

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adolescence (Alsop, 2003; Cross, 1997; Dalzell, 1998; Gross, 1998; Neihart, Reis, Robinson, & Moon, 2002; Peterson, 2003; Strop, 2002).

Meeting the social and emotional needs of gifted students is a topic of concern in the field of gifted education (Garrett, 2005; Gust, 1997; Jolly & Kettler, 2008). Common social and emotional characteristics of gifted individuals include asynchrony, introversion, perfectionism, intensity, and sensitivity (Alsop, 2003; Cross, 1997; Silverman, 1994). In many gifted students, these characteristics are associated with concomitant problems including increased vulnerability (Silverman, 1997), heightened sensitivity to criticism, frustration from self-imposed criticism (Cross, 1997), and an increased need to achieve (Sowa & McIntire, 1994). Negative aspects of perfectionism including being overcritical of mistakes and fearing failure can potentially cause distress and anxiety for individuals striving to meet unrealistically high standards (Schuler, 2000) and can be associated with underachievement (Davis & Rimm, 2004). A call for affective attention for this population of students has been declared by prominent gifted organizations (e.g., National Association for Gifted Children [NAGC], 2005) and by clinical practitioners working with gifted students (e.g., Peterson, 2003; Silverman, 1997); however, very few empirical investigations have explored recommended interventions to be implemented as part of a gifted education program (Klein, 2004).

### **Perfectionism**

Perfectionism has been associated with giftedness through clinical observations (Adderholdt-Elliott, 1991; Davis & Rimm, 2004; Silverman, 1993, 1994). Although it has not been empirically verified that gifted students experience instances of perfectionism more than nongifted populations (i.e., Parker, 1997), the literature indicates that many gifted students do experience perfectionism (LoCicero & Ashby, 2000; Roberts & Lovett, 1994; Schuler, 2000).

Perfectionism is defined as “the striving for flawlessness” (Flett & Hewitt, 2002, p. 5). Theories on perfectionism are varied; some theorists view perfectionism as being inherently destructive by nature (Burns, 1980; Pacht, 1984) while others consider perfectionism as a positive personality trait necessary for healthy development (Adler,

1973; Dabrowski, 1967; Maslow, 1970). Others believe that perfectionism can range from a continuum of normal to neurotic thoughts and behaviors (Hamachek, 1978; Schuler, 2000). According to Hamachek (1978), neurotic (unhealthy) perfectionists are driven to perform out of the fear of failure and never feel satisfied with their performance because it is never good enough; however, normal (healthy) perfectionists are able to enjoy their work, recognize their limitations on performance, and are motivated to achieve perfection out of the striving for excellence. Unhealthy aspects of perfectionism have been associated with negative outcomes such as anxiety (Delegard, 2004; Frost & DiBartolo, 2002), eating disorders (Goldner & Cockell, 2002), depression (Brown & Beck, 2002), and low self-esteem (Delegard, 2004). Gifted students experiencing unhealthy perfectionism have high levels of anxiety, are highly concerned about making mistakes, and perceive pressure from others to achieve perfection (Schuler, 2000). In addition, Cohen and Frydenberg (1996) have noted that perfectionism is an indication that the gifted student may experience difficulty coping, and perfectionism can immobilize risk-taking that quality learning involves.

Perfectionism has been explored among gifted students in a number of studies over the past decade. Schuler (2000) investigated perfectionism in gifted adolescents through a mixed-method research study. Schuler administered the Goals and Work Habits Survey to 112 gifted seventh- and eighth-grade middle school students in a rural community. Results indicated that 58% of the respondents were normal perfectionists while 29.5% of the students were unhealthy perfectionists; thus, 87.5% of gifted students displayed perfectionism. These findings supported Hamachek's (1978) notion that perfectionism exists on a continuum from healthy to neurotic thoughts and behaviors. Twenty of these perfectionistic students were selected for further qualitative study in which Schuler collected data from peers, teachers, parents, counselors, and the students themselves through semistructured interviews. Normal perfectionists exhibited order and organization, showed a desire "to achieve their 'personal best' since childhood" (Schuler, 2000, p. 187), and worked harder to relieve frustrations of making mistakes. On the contrary, neurotic perfectionists were highly concerned about making mistakes, experienced high levels of anxiety, believed that their perfectionism is a nature of their personality, and

had more of a desire to please others rather than achieve their personal best (except for one participant). Schuler also found that the intense sensitivity to the reactions of others pressured neurotic perfectionists to work hard. These students had an intense perception of others' criticism and expectations of perfection. Neurotic perfectionists resorted to procrastination, worry and anxiety, and working repeatedly to reach perfection. In another key finding of this study, normal perfectionists viewed perfectionism in their lives as a positive component in relation to being more organized, working harder, and setting priorities; neurotic perfectionists viewed perfectionism as a positive component in achieving high performance. All participants also mentioned that they perceived some parts of perfectionism to be unhealthy or harmful, further justifying the need for addressing perfectionism among the gifted population.

More recently, Dixon, Lapsley, and Hanchon (2004) investigated typology of perfectionism in older gifted adolescents. One hundred forty-two juniors attending a residential academy for science, mathematics, and humanities were administered the Frost Multidimensional Perfectionism Scale (MPS; Frost, Marten, Lahart, & Rosenblate, 1990), along with a number of other assessments on psychological symptomatology and adjustment. Unlike previous studies in which three cluster groups of perfectionism emerged, the results of Dixon et al.'s study revealed four typologies of perfectionism: mixed-adaptive, pervasive, nonperfectionist, and mixed-maladaptive. These findings suggested that maladaptive (unhealthy) perfectionism takes two forms: pervasive and mixed. The pervasive type showed high Organization and high Personal Standards along with high Concern over Mistakes, Doubts about Actions, and Parental Expectations and Parental Criticism. The mixed-maladaptive type showed low Organization and low Personal Standards but high Concern over Mistakes, Doubts about Actions, and Parental Expectations and Parental Criticism. Both maladaptive types had a lower sense of security, poorer self-image, and more psychiatric symptoms (depression, anxiety) and patterns of dysfunctional coping than the adaptive or nonperfectionist types. Forty-two percent of participants were clustered as maladaptive types. Implications for this finding included developing positive features of perfectionism (Personal Standards and Organization) and diminishing negative

ones (Doubts about Actions, Concern over Mistakes, Parental Criticism, Parental Expectations) through counseling interventions. These findings also suggested that even though adolescents may display high levels of adaptive perfectionism (high Personal Standards and high Organization), if they concomitantly have high levels of maladaptive perfectionism (Doubts about Actions, Concern over Mistakes, Parental Criticism, and Parental Expectations), then maladaptive dimensions trump the adaptive ones. Despite evidence of high adaptive perfectionism, adolescents of the pervasive type also experienced maladaptive psychiatric symptoms (poor self-image, low personal security) and dysfunctional coping.

Positive and negative perfectionism have also been explored among Chinese gifted students in Hong Kong (Chan, 2007). The Positive and Negative Perfectionism Scale (PNPS-12), written in Chinese, was used to measure positive perfectionism (the realistic striving for excellence) and negative perfectionism (the rigid adherence to perfection and preoccupation with avoiding mistakes). The PNPS-12 was also used to determine the relationships among perfectionism, self-efficacy, and subjective well-being. Results verified the two empirically differentiated forms of perfectionism (positive and negative) among a broad range of gifted students (grades 2 through 12). Multiple regression analyses indicated that positive perfectionism was predictive of life satisfaction and positive affect while negative perfectionism was predictive of negative affect. These findings support the notion that perfection should not be eliminated altogether; rather, positive perfectionism (the realistic striving towards excellence) should be enhanced by improving the general self-efficacy of students (Chan, 2007).

In sum, many authors agree that maladaptive tendencies associated with unhealthy perfectionism require attention. Researchers investigating multidimensional perfectionism theory have also noted that intervention efforts should be aimed to not only decrease unhealthy perfectionism tendencies, but to also increase positive qualities of perfectionism (Chan, 2007; Dixon et al., 2004; Rice & Lapsley, 2001). Thus, *applied* multidimensional perfectionism theory within a model of intervention aims to enhance the healthy striving toward excellence while diminishing negative self-critical evaluative tendencies.

### Models of Intervention

Two primary models are offered in the literature for addressing the emotional needs of the gifted: a remedial approach and a developmental approach. The former is reactive and generally therapeutic (Colangelo, 2003). A remedial approach calls for direct intervention by the counselor to help solve the problem at hand. A developmental approach, however, is more proactive in nature. Although involving some therapeutic approaches, the primary goal is to help promote individual growth, recognize the child's developmental potential, and aim to help the child achieve actualized potential (Colangelo, 2003; Silverman, 1993).

The developmental approach focuses on emotional growth toward ideals, which include reflective judgment, authenticity, self-actualization, creativity, commitment to goals, responsibility, and a strong sense of self-efficacy (see Silverman, 1993). Colangelo (2003) also noted that the developmental approach does not rely on research evidence to support the belief that gifted students are at risk for emotional maladjustment, a belief not reliably supported by the literature. The ideals addressed by a developmental model (Silverman, 1993) can benefit any gifted child, regardless if he or she is experiencing distress because the goal is to move toward developing actualized potential (Silverman, 1993). Colangelo noted that the developmental model does not approach needs of the gifted as problems to be solved, but as opportunities to be nurtured.

Affective curriculum can be applied within a primary developmental model of intervention. Affective curriculum is defined as curriculum that addresses emotional needs, such as the need for appreciation and acceptance (Johnsen, 2000). This includes activities focusing on emotional needs (Colangelo, 2003), grouping with other gifted peers, group discussion, and bibliotherapy (Peterson, 2003; Silverman, 1993). The term *bibliotherapy* refers to the use of reading material to help a child develop self-understanding in solving personal problems (Davis & Rimm, 2004; Frasier & McCannon, 1981).

Primary preventive interventions have been demonstrated to be effective by a number of studies among normal school populations (see Durlak & Wells, 1997). The goal of primary prevention programs is to reduce current and future incidences of maladjustment

by equipping students with strategies used to handle these problems (Durlak & Wells, 1997). Primary prevention programs may target (a) global populations: intervention addresses all members within a population; (b) at-risk groups: individuals targeted for intervention have a likelihood to experience eventual problems; and (c) transitioning groups: those students who may soon experience distress caused by major life transitions (e.g., change of schools, divorce; Durlak & Wells, 1997).

Klein (2004) implemented a primary intervention program within three gifted middle school classes once per week for 50 minutes for 11 weeks. Sixty-two gifted middle school students from a semi-industrial Midwestern town participated in the study. The purposes of the study were to test a curriculum (Reaching New Heights) to determine decreases in negative perfectionism, academic anxiety, social anxiety, and perceived distress, and to determine improvements on students' self-efficacy, problem-solving, and coping strategies. To determine the effects of the intervention on perfectionism, the researcher administered selected items from Frost's MPS (Frost et al., 1990) as a measurement for perfectionism in pre- and posttests with the treatment group and control group. No significant effects were found for perfectionism, but Klein offered a number of suggestions to improve the curriculum and outcomes. These included narrowing the focus of the curriculum to only one area (i.e., perfectionism, time management, or stress management), allowing students to discuss issues of perfectionism that are not as personal (using bibliotherapy, or giving advice to a friend who may deal with perfectionism), and implementing the intervention in the spring semester when students may be more likely to experience higher demands than in the fall. Klein's study was the first of its kind to test such an intervention, and its sample size of 62 students limited statistical power. Klein recommended replication with larger sample sizes and a stronger focus on one intervention area.

### **Statement of the Problem**

A review of perfectionism theory (Burns, 1980; Hamachek, 1978; Pacht, 1984) indicates that the aspects associated with unhealthy

perfectionism include being unable to experience pleasure from efforts, having a compulsive drive to reach unrealistic goals, striving for perfection out of the fear of failure, undergoing harsh self-criticism, procrastinating, and equating self-worth with performance (summarized in Enns & Cox, 2002). Students who are overly concerned about mistakes and who feel pressure to meet high expectations may avoid risk-taking in learning experiences (Davis & Rimm, 2004). These negative outcomes necessitate proactive attention.

In order for students to achieve actualized potential, they need to learn to understand how their heightened reactions to self- and other-imposed expectations can influence their thoughts and behaviors. It is also important to help students appreciate their own strivings toward excellence through developing a healthy pursuit of excellence. An affective curriculum aimed at helping gifted adolescents decrease unhealthy aspects of perfectionism and develop more positive coping approaches is needed to promote healthy social and emotional growth.

### **Purpose of the Study**

The central purpose of the present study was to determine the effects of an affective curriculum on perfectionism among suburban gifted middle school students. It was hypothesized that, given opportunities to develop self-awareness of expectations (self- and other-imposed) through participation in discussions, activities, role-playing, games, and enhancement of goal-setting within an affective curriculum, gifted students would decrease unhealthy aspects of perfectionism and enhance healthy dimensions.

The authors recognize that not every gifted student is “at-risk” for psychological distress, noting that the majority of research on emotional adjustment indicates that gifted students are not necessarily more vulnerable to distress than their nongifted peers (e.g., Olszewski-Kubilius, Kulieke, & Krasney, 1988; Oram, Dewey, & Rutemiller, 1995; Reynolds & Bradley, 1983; Terman & Oden, 1951). However, heightened sensitivities and awareness of self- and other-imposed expectations of gifted students may influence the manifestation of perfectionism uniquely for gifted children. The authors also

acknowledge the call for affective attention to the population from gifted organizations and practitioners in the field. Positive emotional development through curriculum approaches; guidance on how to cope with stress, criticism, and social situations associated with giftedness; and opportunities to be with gifted peers have continued to be cited as recommended affective strategies for this population (Neihart et al., 2002; Nugent, 2000).

The study was designed to not only decrease self-critical tendencies that are inherent in perfectionism, but to also enhance healthy pursuits of excellence. The primary developmental approach in the present study was designed for all participating gifted students, regardless of the level of psychological adjustment. The authors do not wish to perpetuate the myth that gifted students are more perfectionistic or experience more distress than normal populations (Klein, 2004); rather, gifted students are targeted in this intervention because sensitivity, perfectionism, intensity, and introversion are cited as the most common personality traits among gifted students (Silverman, 1997). Gifted students may mask personal distress (Gross, 1998; Jackson & Peterson, 2003) and often feel that emotional support is not available to them at school (Peterson, 1990, 2003). The personality characteristics of sensitivity and intensity (Lovecky, 1992), and their interaction with how gifted students perceive the pressure to meet the expectations of themselves and/or others suggest that gifted students may need emotional support through efforts such as an affective curriculum.

Thus, an affective curriculum was designed to help gifted adolescents develop awareness of their own giftedness and heightened sensitivities to self- and other-imposed expectations. In helping students understand the difference between unhealthy perfectionism and a pursuit of excellence, gifted adolescents can evaluate their own thoughts and behaviors to determine their motivations for pursuing high standards. This approach values the unique emotional characteristics of the gifted adolescent, seeking not to eliminate the student's aims for high standards, but to help him or her decrease negative self-evaluations associated with meeting these standards.

## Method

### Participants

The sample included 153 gifted students in grades 6, 7, and 8 in a suburban school district in the Southeast United States. These students participate in SEARCH (an acronym for Sumner's Enrichment Areas of Research, Creativity, and Higher-level thinking), a gifted middle school enrichment program attended every day as a class period (50–55 minutes). Students qualified for the gifted program by meeting Tennessee's state criteria for intellectual giftedness in the areas of educational performance, creativity, and/or cognition (Tennessee State Department of Education, 2007).

Three schools from the public school district were selected by convenience sampling. Students from two schools were selected as the experimental group ( $n = 81$ ), while students from a third school were selected as the control group ( $n = 72$ ). The two schools with students assigned to the experimental group were willing to commit to implementing the intervention in their classrooms during the specified time frame (Spring semester). There was one SEARCH teacher in each experimental school and two teachers at the control school. In one experimental school, the teacher was also a researcher (first author) of the present study. The school with students assigned to the control group was chosen specifically because its two SEARCH teachers could not commit to full implementation of the curriculum during the Spring semester. Results must be interpreted in light of the threats posed by sampling bias. Table 1 indicates demographic data for gender, grade, and race for the control and experimental groups.

### Instrumentation

**Assessment of perfectionism.** Perfectionism was measured by the Goals and Work Habits Survey (GWHS; Schuler, 1994). The GWHS is a modified version of the Frost Multidimensional Perfectionism Scale (MPS; Frost et al., 1990). The modified instrument has been validated in studies by Schuler (Schuler, 1997; Schuler & Siegle, 1994). The scale consists of 35 response items on a 5-choice

Table 1

*Demographic Information for Experimental and Control Groups: Frequency (Percent)*

Group	Experimental <i>n</i> = 81	Control <i>n</i> = 72	Total <i>N</i> = 153
Males	35(43.2)	35(48.6)	70(45.8)
Females	46(56.8)	37(51.4)	83(54.3)
Grade 6	23(28.4)	23(31.9)	46(30.1)
Grade 7	30(34.6)	19(26.4)	49(32.0)
Grade 8	28(34.6)	30(41.7)	58(37.9)
Asian	2(2.5)	3(4.2)	5(3.3)
Black	4(11.4)	4(5.6)	8(5.2)
White	71(87.7)	64(88.9)	135(88.2)
Hispanic	3(3.7)	1(1.4)	4(2.6)
Other	1(.1)	0(0)	1(.7)

Likert scale. Each response ranges on a continuum from *strongly agree* to *strongly disagree*. These subscales include Concern over Mistakes (CM), Personal Standards (PS), Parental Expectations (PE), Parental Criticism (PC), Doubts about Actions (DA), and Organization (O). Table 2 describes each dimension of perfectionism as measured by the GWHS. Higher subscores indicate higher levels of each measured dimension of perfectionism. The GWHS has been used among gifted middle school students with a nationwide population representing broad racial, social, and economic levels. Schuler and Siegle (1994, as cited in Schuler, 1997) found an overall coefficient alpha of .87. For the present study, unhealthy perfectionism was measured using subscores of Concern over Mistakes, Parental Expectations, Parental Criticism, and Doubts about Actions, while healthy perfectionism was measured using subscores of Personal Standards and Organization (Frost, Heimberg, Holt, Mattia, & Neubauer, 1993). However, some studies indicate that high PS along with high Concern over Mistakes, Doubts about Actions, Parental Criticism, and Parental Expectations classify unhealthy perfectionists (e.g., Dixon et al., 2004; Parker, 1997; Schuler, 2000). For the present study, Personal Standards was included as an aspect of healthy perfectionism because the develop-

Table 2

*Definitions for Dimensions of Perfectionism Measured by the Goals and Work Habits Survey*

Dimensions of Perfectionism	Measures
Unhealthy	
Concern over Mistakes (CM)	"tendency to overreact or respond negatively to mistakes."
Parent Expectations (PE)	"the belief that parents set very high standards for the student."
Parental Criticism (PC)	"recollections of parents being excessively critical."
Doubts about Actions (DA)	"the degree to which students doubt the ability to complete tasks effectively."
Healthy	
Personal Standards (PS)	"preference for high standards, goals and performance expectations."
Organization (O)	"the importance one places on organization, order, and neatness."

Note. Description of measures are from p. 98, Dixon, Lapsley, and Hanchon (2004).

mental model of intervention seeks to help students use high personal standards for pursuing excellence (Silverman, 1993).

**Assessment of treatment integrity.** Treatment integrity is defined as the degree to which interventions are implemented as intended by the researcher (Gresham, MacMillan, Beebe-Frankenberger, & Bocian, 2000). Assessing treatment integrity enhances internal validity and external validity of findings (Lane & Beebe-Frankenberger, 2004). The absence of treatment integrity can compromise the understanding of the relationship between the independent variable and the dependent variable (internal validity; Gresham et al., 2000). Furthermore, without assessing treatment integrity, the results of this study cannot be generalized to other gifted students (external validity; Kazdin, 1986). Treatment integrity was assessed from two perspectives (teacher and researcher) using component checklists. Each rater completed a 6-item component checklist that contained core intervention areas. Teachers completed a treatment integrity form at the end of each lesson, rating the presence or

absence of each item. The researcher also observed each experimental group classroom at least once during the intervention.

**Assessment of social validity.** Social validity measures the extent to which teachers and students believe the intervention was useful and relevant (Lane & Beebe-Frankenberger, 2004). The use of subjective evaluation is important in order to understand the social acceptability of goals and outcomes (Lane & Beebe-Frankeberger, 2004). Thus, these subjective evaluations complement more objective assessments (Foster & Mash, 1999; Wolf, 1978). Social validity was assessed post-intervention by students and the teacher participating in the experimental group. The teacher-researcher in the experimental group did not participate in social validity assessment to avoid creating a biased response. The students and the teacher indicated responses on a 5-point Likert-type scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Items included statements related to the perceived ability to meet the purpose of the intervention, the appropriateness of the intervention with the student population, and the perceived acceptability of the curriculum. Both the teacher and students also had opportunities to indicate their opinions on the intervention through open-ended responses.

## Research Design

The present study investigated the following research questions:

1. Among gifted adolescents, what are the effects of an affective curriculum on perfectionism?
2. Among gifted adolescents specifically identified with moderate to high levels of unhealthy perfectionism, what are the effects of an affective curriculum on perfectionism?

All participating students received consent forms to be signed by their parents/guardians. The researcher implemented a nonequivalent pretest/posttest control group design (Gall, Gall, & Borg, 2007). A pretest of the GWHS (Schuler, 1994) was given to both the control and experimental groups one week before and one week after the curriculum implementation. The control group teacher was given no specific training on the curriculum until after posttest completion. The researcher requested that the teacher of the four control group

Table 3

*Present Study's Perfectionism Scores Compared to Parker and Mills (1996)*

Scale (GWHS)	Present Study	(Parker & Mills, 1996)	<i>t</i>	<i>g</i>
	<i>N</i> = 153 <i>M</i> ( <i>SD</i> )	<i>N</i> = 600 <i>M</i> ( <i>SD</i> )		
CM	21.54 (6.98)	18.09(5.61)	6.07**	.54
PS	24.41(4.93)	23.49(4.66)	2.30*	.19
PE	17.32(3.56)	13.77(4.09)	12.28**	.93
PC	10.01(3.70)	6.79(2.68)	10.11**	1.00
DA	11.34(3.08)	8.95(2.74)	9.54**	.82
O	21.61(5.60)	20.91(5.41)	1.53	.13

Note. GWHS = Goals and Work Habits Survey. CM = Concern over Mistakes. PS = Personal Standards. PE = Parental Expectations. PC = Parental Criticism, DA = Doubts about Actions. O = Organization.

\* $p < .05$ . \*\* $p < .001$ .

classrooms continue with the academic enrichment curriculum that is typically provided in the gifted classroom setting, which does not intentionally address social or emotional issues.

### Identifying Unhealthy Perfectionists

Because not all gifted students experience perfectionistic tendencies, the researchers also studied the effect of the curriculum on those who specifically experience unhealthy perfectionism (Research Question 2). No cut-off score for unhealthy perfectionism exists in the literature. Previous studies have employed cluster analyses to determine *types* of perfectionism (nonperfectionists, healthy perfectionists, unhealthy/dysfunctional perfectionists). Cluster analyses categorize data based on common properties, which result in groups that are internally similar and maximally different from other groups (e.g., Dixon et al., 2004). However, the present sample has statistically significant higher scores of perfectionism compared to previous samples (i.e., Parker & Mills, 1996). Sample *t*-tests were employed to compare the present study with Parker and Mills' (1996) sample (see Table 3). The present study had statistically significant higher mean scores of Concern

over Mistakes, Personal Standards, Parental Criticism, Parental Expectations, and Doubts about Actions. Hedge's  $g$  effect sizes were also calculated to determine the magnitude of these differences.

The researchers set a cut-off score based on Parker and Mills' (1996) mean scores of "dysfunctional perfectionists." In Parker and Mills' study, the summed Concern over Mistakes, Parental Criticism, Parental Expectations, and Doubts about Actions (unhealthy dimensions of perfectionism) mean scores for the cluster group "dysfunctional perfectionists" totaled to 61.6. The researcher then calculated the 50th percentile score of summed CM Concern over Mistakes, Parental Criticism, Parental Expectations, and Doubts about Actions scores for the present sample to be 59. It was therefore reasonable to identify the top half of the present sample (those with summed Concern over Mistakes, Parental Criticism, Parental Expectations, and Doubts about Actions scores of 59 or higher) as students with *moderate* to *high* levels of unhealthy perfectionism because the summed score of 59 is within close range of 61.6 (mean score of dysfunctional perfectionists) from Parker and Mills' study.

## Procedures

Teachers in the experimental condition were given training to use the affective curriculum, Searching for Perfect Balance. The researcher (first author) was one of the teachers implementing the curriculum at a school assigned to the experimental group. In the experimental group, four classrooms received the curriculum entitled Searching for Perfect Balance. This curriculum included nine lessons, 45–50 minutes each, taught within a 6-week period in the spring semester (late January through early March). The curriculum was developed from ideas provided by empirical studies indicated by the review of literature, books for teachers and parents of gifted students, and suggestions by professionals with clinical experience working with gifted students. In a similar study that tested the effect of a program on perfectionism, anxiety, problem solving, self-efficacy, stress, and coping, Klein (2004) outlined specific objectives and activities for targeting perfectionism among gifted middle school students. Many of these same activities and strategies were retained for the present study but were adapted based on previous recommendations. Furthermore,

Delisle and Galbraith (2002; Galbraith & Delisle, 1996) have published books that provide teachers, parents, and students with strategies and activities to deal with emotional issues; however, these are not structured programs that deal specifically with the constructs of the present study (perfectionism, coping strategies). Activities were compiled from a variety of sources that can specifically help students develop self-awareness and skills to cope with pressures, expectations from others, and unhealthy aspects of perfectionism. While compiling the nine lessons to be included in the curriculum, the authors were careful to include activities that (a) matched the ideals of a developmental model of intervention (i.e., enhancing self-awareness, appreciation for giftedness), (b) showed evidence of successful psychosocial outcomes from previous research (e.g., I CAN DO from Dubow, Schmidt, McBride, Edwards, & Merk, 1993), and/or (c) included how the concept of “giftedness” may influence thoughts and behaviors associated with meeting self- or other-imposed expectations.

Lesson 1 involved an introduction to the Searching for Perfect Balance program, establishment of group guidelines, a discussion on giftedness, the advantages and disadvantages associated with being gifted, and an examination of how others perceive giftedness (Delisle & Galbraith, 2002). In Lesson 2, students self-assessed perfectionistic tendencies. Through discussion, they identified sources of perfectionism and feelings associated with failure. They also learned to differentiate between unhealthy perfectionism and the pursuit of excellence. Lesson 3 allowed students to have opportunities to express their experiences through an activity called the “Line Game” (adapted from Gruell, 2007). In the lesson, the teacher read several examples of common experiences of gifted students (e.g., “You are expected to make straight A’s on your report card”). Students who shared the experience stepped forward toward a line, and without saying a word were able to see that other gifted peers may have also experienced the same feelings. Another objective of this lesson was to help students understand that they are valued for who they are, not for what they do. Students also created masquerade masks to show “the me behind the mask.” They used art supplies, magazine clippings, quotes, poetic phrases, and the like to decorate a mask that revealed the real self.

In Lesson 4, techniques of bibliotherapy were applied using the poem “George Gray” by Edgar Masters (recommended by

Adderholdt-Elliott & Eller, 1989). Students also thought through consequences of perfectionistic behaviors on the body, mind, and relationships. Students participated in an activity of matching “rocky start” situations to notable individuals (Galbraith & Delisle, 1996; Klein, 2004). In Lesson 5, students determined the sources of perfectionism and examined the expectations of others. Students evaluated these expectations as realistic or unrealistic, and whether they were accurately perceived. Students also learned the technique of using “I messages” as a strategy to respond to unrealistically imposed high expectations. This technique was practiced through role-playing simulations.

In Lesson 6, students learned and applied the I CAN DO problem-solving strategy (Dubow et al., 1993). This guided students in applying a series of steps including “Identify the problem, what Choices are available to me?, pay Attention to the information and consequences, Narrow the choices down to one, Do it, Observe the outcome” (Dubow et al., 1993, p. 431). This approach was a recommended strategy in helping students develop positive coping toward stressors (Dubow et al., 1993). Students read a short story involving a character dealing with the demanding expectations of others. Techniques of bibliotherapy including identification, catharsis, and insight (Afolayan, 1992) were applied. Students read a personal narrative written by a gifted high school student. This offers a less threatening approach to exploring problems associated with self-criticism, pressures, and unhealthy perfectionism. The use of stories written by real-life gifted teenagers is an approach recommended by Rimm (Davis & Rimm, 2004; Rimm, 1990).

In Lesson 7, students learned relaxation techniques and practiced self-affirmations (recommended by Galbraith & Delisle, 1996; Kutlesa, 2002; Nugent, 2000; Strop, 2002). Students engaged in a writing exercise developing self-affirmations. Students also compiled a list of resources that were available to them for emotional support using letters A–Z. This included aspects of their personality, adults they can trust, hobbies they enjoy, and favorite activities. In Lesson 8, students learned techniques of cognitive restructuring. First, they applied the strategy “What’s the worst thing that could happen if . . .” in a journal entry. This strategy could have been applied to new experiences in which risks could involve failure (recommended by Adderholdt-Elliott & Goldberg, 1999). Techniques of bibliotherapy were applied through

Table 4

*Posttest Comparisons Between Treatment Groups*

Dependent Variable	Control <i>n</i> = 72 <i>M</i> ( <i>SD</i> )	Experimental <i>n</i> = 81 <i>M</i> ( <i>SD</i> )	<i>df</i>	<i>t</i>	<i>p</i>	<i>d</i>
Perfectionism (GWHS)						
CM	21.28 (7.09)	19.91 (6.65)	151	1.23	.22	.34
PS	23.94 (5.34)	23.09 (5.05)	151	1.02	.31	.16
PE	16.63 (3.92)	17.12 (4.07)	151	-.77	.44	-.12
PC	9.71 (3.86)	10.75 (4.01)	151	-1.64	.10	-.26
DA	11.08 (3.20)	10.86 (3.39)	151	.41	.68	.08
O	20.92 (5.73)	21.67 (5.76)	151	-.81	.42	-.13

Note. GWHS = Goals and Work Habits Survey. CM = Concern over Mistakes. PS = Personal Standards. PE = Parental Expectations. PC = Parental Criticism. DA = Doubts about Actions. O=Organization.

the readings of a personal narrative written by a gifted high school student. Students identified irrational thinking and negative self-talk within the narrative and replaced these with rational thinking and positive self-talk. This helped students respond to expectations of self with positive self-talk. Finally, in Lesson 9, students learned to develop realistic goals and create steps to achieve them (recommended by Galbraith & Delisle, 1996; Kutlesa, 2002; Nugent, 2000; Silverman, 1993; Strop, 2002). Teachers also presented a review of all lessons. Students read letters of gifted kids seeking advice (in a Dear Abby format). Students wrote advice column responses incorporating information learned in the Searching for Perfect Balance program.

## Results

In order to determine treatment effects, researchers employed independent *t*-tests comparing posttest scores for the experimental and control groups. No significant pretest differences existed, and there were no violations of assumptions. Independent *t*-tests revealed no statistically significant differences between the experimental and control groups' posttests scores of the GWHS. Table 4 indicates findings.

Table 5

*Posttest Comparisons of Unhealthy Perfectionists Between Treatment Groups*

Dependent Variable	Control	Experimental	df	t	p	d
	n=37 M (SD)	n=37 M (SD)				
Perfectionism (GWHS)						
CM	24.62 (6.92)	21.41 (6.56)	72	2.05	.04*	.48
PS	24.70 (5.68)	23.24 (5.06)	72	1.17	.25	.27
PE	18.84 (3.35)	19.08 (3.24)	72	-3.17	.75	-.07
PC	11.65 (3.44)	12.30 (3.88)	72	-.76	.45	-.18
DA	12.24 (3.14)	12.16 (3.18)	72	.11	.91	.09
O	20.68 (5.44)	20.89 (5.61)	72	-.17	.87	-.04

Note. GWHS = Goals and Work Habits Survey. CM = Concern over Mistakes. PS = Personal Standards. PE = Parental Expectations. PC = Parental Criticism. DA = Doubts about Actions. O = Organization.

\*  $p < .05$

In order to determine treatment effects only among participants identified as unhealthy perfectionists, differences in experimental and control group posttests were also compared using independent  $t$ -tests. There were no significant pretest differences and no violations of assumptions. Results revealed that unhealthy perfectionists in the experimental group had statistically significant lower posttest scores on Concern over Mistakes (refer to Table 5). Using Cohen's (1988) guidelines for effect size estimates (.2 small, .5 moderate, .8 large), results show moderate effect for Concern over Mistakes ( $d = .48$ ).

Dependent  $t$ -tests were also employed to compare pre- and posttest scores on dimensions of perfectionism among unhealthy perfectionists in the experimental group. There were no violations of assumptions. Results indicated that posttest mean scores on Concern over Mistakes ( $M = 22.23$ ,  $SD = 7.73$ ) were significantly lower than the pretest mean scores ( $M = 25.43$ ,  $SD = 6.50$ ),  $t(39) = 3.86$ ,  $p = .0004$ , with a moderate effect size ( $d = -.58$ ). Posttest mean scores of Personal Standards also decreased from pretesting ( $M = 25.05$ ,  $SD = 4.71$ ) to posttesting ( $M = 23.45$ ,  $SD = 4.98$ ),  $t(39) = 2.69$ ,  $p = .01$ , with a small to moderate effect size ( $d = -.40$ ).

In order to determine if the significant results were not due to other confounding variables, history effects, or testing effects, it was also useful to determine if the control group may have also experienced changes over time. Posttest scores ( $M = 24.62$ ,  $SD = 6.92$ ) on Concern over Mistakes were lower than pretest scores ( $M = 26.30$ ,  $SD = 6.15$ ),  $t(36) = 2.13$ ,  $p = .04$ , with a small effect size ( $d = -.36$ ). Posttest scores on Parental Expectations ( $M = 18.84$ ,  $SD = 3.35$ ) were lower than pretest scores ( $M = 19.65$ ,  $SD = 2.91$ ),  $t(36) = 3.03$ ,  $p = .005$ , with a moderate effect size ( $d = -.50$ ).

One-way multiple analysis of variance (MANOVA) procedures revealed that gender did not have an effect on pre/posttest difference scores on each dimension of perfectionism,  $F(6,33) = .90$ ,  $p = .50$ , nor did grade,  $F(6,33) = .62$ ,  $p = .82$  among unhealthy perfectionists. However, one-way MANOVA procedures did reveal a teacher effect (teacher-researcher vs. other teacher),  $F(6,33) = 4.28$ ,  $p = .003$  in the experimental group. Follow-up ANOVAs revealed a significant effect on pre/posttest differences on Organization between students of different teachers,  $F(1, 38) = 13.54$ ,  $p = .0007$ . Unhealthy perfectionists receiving the curriculum from the teacher-researcher (first author) increased Organization (pre/posttest difference,  $M = .43$ ,  $SD = 2.34$ ), while unhealthy perfectionists receiving the curriculum from the other experimental group teacher decreased Organization (pre/posttest difference,  $M = -2.0$ ,  $SD = 1.77$ ).

### **Treatment Integrity**

Treatment integrity scores were computed for each rater (teacher and researcher) by dividing the sum of the number of components present by the total number of components possible and multiplying the quantity by 100 to obtain a percentage. An overall session integrity score was acquired for both the teacher and researcher perspectives by averaging the treatment integrity scores across the lessons observed by the researcher or taught by the teachers. Results indicate that the curriculum was implemented with a 99.38% integrity score.

## Social Validity

Social validity was assessed postintervention by students and teachers participating in the experimental group. Students and one experimental group teacher indicated responses to 15 items on a 5-point Likert-type scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Inspection of mean scores revealed that students rated the intervention slightly favorably ( $M = 3.13$ ) to highly favorably ( $M = 4.41$ ). For example, *I liked the program* ( $M = 3.44, SD = 1.12$ ) and *I liked most of the activities* ( $M = 3.99, SD = .95$ ), although students indicated a lower rating on *I have shared with my friends what I have learned* ( $M = 2.56, SD = 1.18$ ) and *I have talked to my parents about what I have learned* ( $M = 2.65, SD = 1.09$ ). Teacher social validity on all 15 components was rated highly favorably ( $M = 4.66; SD = .23$ ). Due to experimenter bias, the teacher-researcher did not participate in the assessment of social validity.

## Discussion

Despite the recognized need for addressing affective concerns such as perfectionism among gifted students (NAGC, 2005), few investigations have translated the theories of perfectionism into practical applications for the classroom (Nugent, 2000; Parker & Adkins, 1995). Counselors, teachers, and prominent authors in the field of gifted education have offered suggestions for addressing emotional needs, but few interventions have been empirically investigated within gifted populations. Thus, the present study addresses a void in the literature by providing evidence that supports affective curricular components addressing perfectionism.

The study is different from other approaches geared to targeting perfectionism, because the affective curriculum was developed through the lens of understanding the unique emotional characteristics of the gifted child (Colangelo, 2003). Unlike other interventions in clinical psychology that have been predominantly focused on cognitive-behavior therapeutic approaches aimed at eliminating perfectionism, the present intervention was developed from an understanding of the emotional development and personality characteristics of the

gifted child. Specifically, the intervention helped students understand how qualities of giftedness such as heightened sensitivity and intensity may influence their thoughts and behaviors toward pursuing perfection. For example, discussions of labels such as “gifted,” “brilliant,” and “genius” are unique in an affective curriculum developed to target gifted students. Gifted students can internalize these superlatives as pressure to achieve at a level commensurate with such praise (Davis & Rimm, 2004). The discussions, activities, games, and bibliotherapy techniques within the affective curricula were aimed at giving gifted students an opportunity to relate to each other’s experiences and develop self-appreciation for their unique characteristics associated with being gifted.

The intervention was not developed to eradicate perfectionism altogether, but to help the child use dimensions of perfectionism in a positive way as a means to pursue excellence (Silverman, 1993). The intervention, however, was intended to diminish the self-criticism and negative thinking that may be associated with attaining high standards. Because the intervention was specifically developed for gifted students, not for general populations, the findings of the study suggest the value of considering the uniqueness of a gifted child’s heightened emotional awareness within the framework of the affective curriculum.

### **Research Question 1**

Among gifted adolescents, what are the effects of an affective curriculum on perfectionism and coping?

When examining posttest means of the experimental and control groups, findings indicated no statistically significant results. Recall that the curriculum was developed from the theoretical frameworks of a developmental primary intervention model. The developmental model, rather than a reactive remedial model, promotes individual growth rather than narrowly focusing on the “problem” of perfectionism (Colangelo, 2003). The ideals addressed by a developmental model (Silverman, 1993) have been noted to benefit any gifted child, regardless if he or she is dealing with a specific problem; however, results from the present study do not show immediate beneficial effects for all participants. The aim of a primary intervention is proactive in

nature—to help students reduce adjustment problems and increase competencies for future stressors (Dubow et al., 1993; Durlak & Wells, 1997). Thus, the long-term effects of the intervention may not be noted in posttest self-reported measurements, but in real-life situations when students experience academic stress in current or future situations. Longitudinal research is needed to determine effects of the intervention on more global indices of adjustment. As a primary intervention, one intended for all gifted participants, findings showed no immediate effects on perfectionism.

## Research Question 2

Among gifted adolescents specifically identified with moderate to high unhealthy perfectionism, what are the effects of an affective curriculum on perfectionism and coping?

When comparing posttest scores to the control group, the experimental group had significantly lower Concern over Mistakes than the control group. This suggests that the affective curriculum had an effect on decreasing the overconcern for making mistakes. Moreover, when comparing pre- and posttest means among the unhealthy perfectionists in the experimental group, there were notable decreases in Concern over Mistakes, Doubts about Actions, and Personal Standards. The effect sizes show that the decrease in Concern over Mistakes was moderate ( $d = -.58$ ), and the decreases in Doubts about Actions and Personal Standards were small to moderate.

The curriculum had the most significant effects on Concern over Mistakes. However, this evidence is only suggestive, and causal inferences cannot be made without random assignment (Gall et al. 2007). Frost et al. (1990) noted that Concern over Mistakes is the most central concept to the construct of unhealthy perfectionism, associated with psychopathology, specifically self-critical depression, procrastination, and compulsive experiences. Concern over Mistakes is an overly critical evaluative tendency that leads perfectionists to achieve high goals motivated from a fear of failure rather than the need to achieve. Thus, Concern over Mistakes is the heart of unhealthy perfectionism noted by perfectionism theorists (Burns, 1980; Hamachek, 1978; Pacht, 1984). Many of the curriculum components in the present study focused on helping students cope with making mistakes (e.g.,

use of humor, use of I CAN DO problem-solving strategy, practicing experiencing “failure” in a game). Thus, suggestive evidence shows program success in decreasing this critical self-evaluative tendency for those who struggle with it the most—the unhealthy perfectionists.

The curriculum itself could not change the actual Parental Expectations or Parental Criticism students experience; rather, it could only equip students to deal with these expectations and criticisms. The curriculum also allowed for students to understand how their giftedness may influence heightened perceptions of these expectations. Thus, in order for Parental Criticism and Parental Expectations to actually decrease, parental involvement may need to be an added component in future implementations of affective curriculum (e.g., parent nights, parent involvement in discussions, newsletters to parents about the effects of unhealthy perfectionism). Results of the Social Validity Checklist indicated that many students did not share information they had learned in the program with their parents. Future investigations should seek to enhance parental involvement and understanding in addressing the emotional needs of gifted children.

The intervention had a small effect on decreasing Doubts about Actions in the experimental group. Doubts about Actions measures the feeling of uncertainty after a job is completed (Frost et al., 1990; e.g., *even when I do something carefully, I often feel that it is not quite right*). Like Concern over Mistakes, Doubts about Actions is a critical self-evaluative tendency, related to evaluating self-worth based on performance. Thus, findings support that self-evaluative tendencies are possibly influenced by the components of the intervention.

Contrary to the hypothesis that the experimental group would increase healthy aspects of perfectionism, the unhealthy perfectionists who participated in the program actually experienced a significant decrease in Personal Standards, a dimension that has been debatably associated with healthy emotional functioning. The Personal Standards raw score must be understood in the context of how it compares to other dimensions of perfectionism. The Personal Standards score has also been correlated with maladaptive tendencies such as self-critical depression (Frost et al., 1993; Frost et al., 1990). Although most of the Personal Standards subscale items pertain to positive goal setting (e.g., *I am very good at focusing my efforts on attaining a goal*), some items incorporate the critical self-evaluation associated with

goals setting (e.g., *If I do not set higher standards for myself, I am likely to end up a second rate person*). Dixon et al. (2004) have noted that when high Personal Standards coexist with other unhealthy dimensions, the negative aspects trump the positive ones.

Hewitt and Flett (1991) have conceptualized multidimensional perfectionism by three motivational trait dimensions: self-oriented, socially-prescribed, or other-oriented. Hewitt and Flett's construct of self-oriented perfectionism, strongly associated with Frost's construct of Personal Standards (Parker, 2002), has been defined as having high personal standards along with the motivation to meet self-expectations (Flett & Hewitt, 2002). While self-oriented perfectionism has been associated with adaptive tendencies such as resourcefulness (Flett, Hewitt, Blankstein, & O'Brien, 1991), positive affect (Frost et al., 1993), and intrinsic motivation (Mills & Blankstein, 2000), it has also been associated with maladaptive tendencies related to stringent self-evaluations (e.g., depression and eating disorders; Flett & Hewitt, 2002).

Frost et al. (1990) noted that high Personal Standards could be associated with psychopathology among individuals with high Concern over Mistakes. Concern over Mistakes was conceptualized to measure "negative reactions to mistakes, a tendency to interpret mistakes as failure, and a tendency to believe that one will lose the respect of others following failure" (Frost et al., 1990, p. 453). The profile of having high Concern over Mistakes and high Personal Standards is Hamachek's (1978) notion of a neurotic perfectionist, one who sets high standards but leaves little room for making mistakes and cannot take pleasure from meeting these standards. Schuler (2000) noted that neurotic perfectionists were in a constant state of anxiety because they were constantly trying to meet the high standards placed upon them (self- or other-imposed), and making mistakes would result in "failure" of not meeting these standards. While the program may have influenced a decrease in a healthy dimension, Personal Standards, because Concern over Mistakes concomitantly lessened, the decrease in Personal Standards reflects that the curriculum may have influenced unhealthy perfectionists to see their goals through a realistic lens and to not equate themselves with "failure" if the goals are not met. Future replications of this program may consider further elaborating on goal-setting strategies.

The researcher also compared the control group's pre- and posttest scores to see if changes in perfectionism and coping occurred without the intervention. The control group had a decrease in Parental Expectations. It is difficult to explain why this happened, especially since posttesting took place just one week prior to state-wide testing. The control group also had a small decrease in Concern over Mistakes; despite this decrease, recall that there were still significant posttest differences between the control and experimental groups on Concern over Mistakes. Furthermore, the effect size of  $-.36$  for the control group's pre- and posttest differences indicates a small effect, whereas the experimental group's pre- and posttests differences had an effect size of  $-.58$ , a much larger effect. The decrease in Parental Expectations and Concern over Mistakes in the control group could be due to pretest sensitization (Gall, et al., 2007), history, chance, or other extraneous variables. Future research may consider more rigorous research designs to enhance inference-making.

In sum, the curriculum decreased multiple dimensions of perfectionism among those with moderate to high unhealthy perfectionism scores, notably Concern over Mistakes and Doubts about Actions. Because Concern over Mistakes and Doubts about Actions measure the self-critical evaluative tendencies most central to the unhealthy perfectionism construct (Frost et al., 1990), this finding warrants the use of affective curriculum, at least as a secondary intervention (an intervention for those who are at special risk), within a classroom setting. Furthermore, the concomitant decrease in Personal Standards, debatably considered a healthy dimension, indicates that unhealthy perfectionists may have learned to set realistic goals, but have learned to not base their self-worth on attaining these goals. Further attention should be given to enhancing realistic goal-setting and equipping students with skills and strategies to attain these goals (e.g., by developing organizational strategies).

### **Limitations**

Results of this study should be interpreted in light of the following limitations. First, this was a preliminary investigation, and the findings need to be replicated in subsequent studies to establish the

validity of these findings. Specifically, because of the nonequivalent control-group design employed and the lack of replication in alternative settings (e.g., urban schools, rural schools), results must be examined cautiously. The absence of random assignment and use of convenience sampling call for special attention to internal and external validity. Generalization of these findings cannot be established until additional replications are made, and causal conclusions cannot be made without the use of true experimental design. Although the researcher used a nonequivalent control-group design to control for threats of internal validity, it is difficult to dismiss pretest sensitization as a threat to internal validity, especially since no test-retest validity is available for the GWHS or MPS from which it was adopted.

The present study is limited by self-reported assessment. Students' responses to the instruments could have been influenced by social desirability. Moreover, perfectionists concerned with self-presentation may have been unwilling to disclose honest responses on self-reported surveys because doing so would be an indication of distress or an open admission of failure (Habke, Hewitt, & Flett, 2001, as cited in Flett & Hewitt, 2002). Furthermore, gifted students are known to "mask" their distress (Gross, 1998; Jackson & Peterson, 2003; Peterson, 1990); thus, responses on survey instruments may not reflect a true indication of a student's perfectionism.

Finally, the researcher (first author) of the present study was one of the teachers implementing the affective curriculum. These students may be further influenced by experimenter bias. Results indicated a teacher effect (researcher-teacher vs. other experimental group teacher) on one perfectionism dimension, Organization. Unhealthy perfectionists receiving the curriculum from the teacher-researcher enhanced Organization while the unhealthy perfectionists from the other experimental group teacher decreased Organization. The researcher-teacher may have provided unintentional emphasis and reinforcement of adaptive strategies beyond what the intervention described.

### **Implications and Future Directions**

Despite the limitations noted above, the findings from the study extend the literature on the social and emotional needs of gifted

students in several ways. The following is a summary of the major implications for practice in addressing perfectionism and coping among gifted adolescents:

Multidimensional perfectionism theory can be effectively translated into classroom-based interventions, helping unhealthy perfectionists decrease self-critical evaluative tendencies; therefore, findings verify the effectiveness of addressing emotional needs in a gifted classroom setting.

1. The findings did not show effects for all students, only those identified with high to moderate unhealthy perfectionism scores. Thus, while a primary developmental model has been recommended and may help students deal with future stress, results indicate the program is most effective as a secondary intervention given to a selective group of students dealing with heightened levels of unhealthy perfectionism.
2. This study validated the use of program components such as techniques of bibliotherapy, group discussion, self-affirmations, changing self-talk, using relaxation techniques, building a shared sense of belongingness among gifted peers, and hands-on activities as helpful in decreasing excessive concern about making mistakes and self-evaluative standards. It is difficult, however, to determine what parts of the affective curriculum were most influential on the program's results. Future research is needed to specify which components of the intervention are most valuable and necessary for producing successful outcomes.
3. The program showed no improvement of developing healthy dimensions of perfectionism (Personal Standards and Organization). Although the intervention did attempt to enhance these aspects, perhaps the program would be more effective if additional lessons focused on enhancing organizational skills and taking steps to achieve goals. Furthermore, the subscale Personal Standards score should be interpreted within the context of other subscale scores. Future research should explore how extra emphasis on goal-setting and organization within the curriculum could influence the development of healthy perfectionism among samples.

4. Although the program was developed to take place outside the context of academic objectives, other components should be considered within the academic environment that can influence perfectionism and coping. For example, in the context of academics, the use of nonthreatening grading procedures and the use of supportive, encouraging classroom environments that accept failure and allow students to take risks in learning (Nugent, 2000) can complement the program described in the present study.
5. Effects of the intervention could be enhanced by parental involvement, especially because perceived parental expectations and parental criticism are components of unhealthy perfectionism. Future research can explore how educating parents on the social and emotional needs of their gifted adolescents can maximize effects of the intervention.
6. In order to understand whether the developmental primary model of intervention truly equipped students for current and future situations, longitudinal research measuring global indices of adjustment is needed. Future research should also investigate the extent to which program effects are maintained over time.

## **Conclusion**

Findings support the efficacy of an affective curriculum on perfectionism among gifted adolescents who experience heightened levels of unhealthy perfectionism. This is the first study to implement an affective curriculum and find significant decreases in self-critical evaluative tendencies among gifted adolescents; however, it was unsuccessful in developing healthy dimensions of perfectionism as hypothesized. Additional research is needed to replicate the present study's findings in broader and more diverse populations and consider the recommendations provided. These findings offer an initial glimpse of success in propelling gifted students to achieve, not out of a fear of failing, but out of the love of learning.

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